Response to Intervention:
A Case Study Documenting one Elementary School’s Successful Implementation

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ABSTRACT

The use of Response to Intervention, more commonly referred to as RTI has become more prevalent as school systems look to find ways of bridging the opportunity gap and provide support those students who are not successful in their attempts to access the general education curriculum. More research is needed in order to have a better understanding of not only how schools implement RTI, but also how they utilize data, monitor student progress and help to ensure fidelity of implementation. The purpose of this study was to examine and explain how one elementary school with a high quality RTI program implemented Response to Intervention while keeping all three essential components in consideration.

The findings demonstrate that the subject elementary school combined several elements of Response to Intervention and in turn, created their own version of a hybrid RTI model that utilized components from both the standard protocol model and the problem-solving model. In order to monitor student progress, universal screeners were utilized several times throughout the year for both reading and math. Reading was also monitored through running records, PALS Quick Checks, Orton Gillingham assessments, and exit tickets, whereas Math utilized formative assessments, anecdotal notes, and exit tickets to track student progress. Each math and reading CLT met weekly to engage in dialogue around student data.

An important finding is that the subject elementary school made RTI implementation decisions around what was best for their students, which allowed for a more flexible and adaptable approach. The system utilized targeted individual student needs and helped to ensure that ALL students had access to the necessary supports that would help to ensure student success.
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GENERAL AUDIENCE ABSTRACT

As schools continue to face increasing demands, including how to meet the needs of students with diverse academic backgrounds, they have been charged with exploring new ways and methods of ensuring that students are successful in their attempts to access the general education curriculum. Response to Intervention, more commonly referred to as RTI, has become more widely used in school systems as they continue to work to ensure student success for all. RTI is seen as a tool to help accurately identify students who have a learning disability (Ciolfi & Ryan, 2011), however more research is needed in order to have a better understanding of how schools implement RTI, as well as how they utilize the data collected and monitor student progress. This qualitative case study analyzes how one subject elementary school implemented RTI, how they utilized data, as well as how they monitored the progress of their students.
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DEDICATION

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Chapter One

Introduction

When the Education for All Handicapped Children Act of 1975 was passed, states utilized the discrepancy model when identifying students with specific learning disabilities (SLD). The discrepancy model was the traditional method utilized by school districts to identify students with a learning disability (Restori, Katz, & Lee, 2009). It requires the identification of a severe discrepancy between achievement and ability to identify a student with a SLD (Ihori & Olvera, 2015). For example, this model measures whether a discrepancy exists between a student’s scores on an IQ test (i.e.: WISC-IV) and his/her scores in one or more areas of academic achievement on a test, such as the Woodcock-Johnson; a comprehensive assessment that evaluates achievement, cognitive abilities, and oral language.

One difficulty with this model was the amount of time it took students to demonstrate this discrepancy, often to the point of failure. Students often had to fail repeatedly before qualifying for special education supports and services, so the discrepancy model is often designated as the “wait-to-fail” method (Fuchs et.al, 2007). Overrepresentation of minority students was also a major concern of the discrepancy model, as the referrals and eligibility determinations were often wrought with subjectivity and error (Ciolfi & Ryan, 2011).

When the Individuals with Disabilities Education Act (IDEA) was reauthorized in 2004, the displeasure with the discrepancy model was evident as Congress moved to revise the Act to reform three interconnected issues: an increase in the number of identified students, doubts about whether the identification process is applied in good faith, and concerns about the reliability of the model. The special education population had increased significantly, with a large percentage of the increase being students who qualified under a learning disability. More than 40% of students identified for special education qualified under SLD (Ciolfi & Ryan, 2011). The
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population influx led to increased costs, which put a notable amount of strain on many school districts. The reauthorization altered the process by which students with learning disabilities qualified for special education services.

Second, with the increase in SLD classifications came a large amount of incredulity about the process used to classify students, due to the rising numbers of students qualifying under the SLD designation (Ciolfi & Ryan, 2011). The number of students who qualified for specific learning disability dominated every other disability category as it increased by 283% from 1976 to 1996. Ciolfi and Ryan (2011) stated that the discrepancy model was viewed as unreliable as the explosive growth seen in the learning disability category was not consistent or even when compared with the other disability categories. Some research has maintained that schools have utilized the LD category as justification for the lack of student growth. Therefore, an identification of LD allows for the focus to be on the child’s learning difficulties, rather than taking a deeper look into inadequate practices (Spear-Swerling, 2008).

Third, the discrepancy model was seen to be unreliable. Committees often denied access to students that should have been eligible and included those who should not have been eligible. Ciolfi & Ryan (2011) maintained that special education referrals and eligibility determinations were subjective and erroneous, which ultimately led to a disproportionate number of minority students being referred for and found eligible for special education services. Evaluations for SLD should be non-discriminatory and being aware of the strengths and weaknesses of the evaluation assessments helps to decrease bias. Even with this awareness, most tests do have some bias, and it can be difficult to predict performance for non-native English language speakers (Armendariz and Jung, 2016).

As an alternative to the discrepancy model, IDEA permitted schools to utilize data that looks at how a student has been responding to intervention (Fletcher, n.d.). The IDEA
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reauthorization enabled school districts to use data collected from research-based interventions such as Response to Intervention (RTI) as a means of identifying students with SLD, as opposed to utilizing the traditional discrepancy model (Ciolfi & Ryan, 2011). RTI was seen as a tool to help accurately identify students who have a learning disability (Ciolfi & Ryan, 2011). Fuchs and Vaughn (2012) note that under the reauthorization, all 50 states allow the use of RTI in LD classification.

The reauthorization did not require the use of early intervening services (EIS), or preventative interventions provided to students in order to ameliorate student academic challenges prior to a special education referral. Rather, the reauthorization encouraged their use when determining eligibility for a student with a learning disability. States with minority special education identifications not commensurate with non-minority students did not have a choice regarding their use of EIS; it was mandatory. Response to Intervention is an EIS that school districts were encouraged to utilize, as it provides students with intensive instruction prior to being found eligible as a student with a disability. Its use was also encouraged as a diagnostic tool. The push behind RTI use was two-fold: 1) RTI would help decrease the number of students who qualified as a student with a learning disability by providing intensive interventions to students who needed additional support in specific skills or concepts; and 2) RTI would help eliminate some of the overrepresentation seen in special education, specifically with respect to African American students (Ciolfi & Ryan, 2011).

Response to Intervention helped to make the process of special education less biased. Therefore, the overrepresentation of minority students and more specifically African American students, would be reduced (Ciolfi & Ryan, 2011). Proponents of RTI believe that utilizing this intervention system will help to decrease the number of students in need of special education support by providing them with increasingly more intensive interventions when they are not
responding to initial instruction or intervention. Opponents argue that qualifying for special education services not only offers service and support to students in need, but also provides students with a layer of defense against discipline or suspension. Some feel that implementing RTI increases the time that it takes a student to qualify for special education services (Ciolfi & Ryan, 2011).

Ciolfi & Ryan (2011) state, “one way to ameliorate this dilemma is to incorporate positive behavioral interventions into the RTI model to avoid problems that can result in removal from school and referral to special education” (p. 5). While there is no consensus between proponents for RTI and those concerned about the lag time in identifying students, most can agree that RTI is a proactive model that considers where each individual student is at both academically and behaviorally. Students gain access to high quality research-based interventions immediately after struggling with a concept. The data gleaned from these interventions enables educators to make important determinations that will help meet individual student needs.

**Response to Intervention Process**

Response to Intervention is a multi-tiered approach that schools utilize to provide academic and behavioral support to students in need of assistance. Jenkins, Hudson, and Johnson (2007) defined RTI as a multi-tiered framework that provides intervention support to students who are unable to access the general education curriculum successfully.

RTI does not come as a packaged program with specific instructions for interventions and implementation. Rather, it offers a framework that guides educators to provide early identification and intervention support to necessary students. Because of this flexibility, schools implement RTI in a variety of ways. However, even with this variability several components remain consistent across RTI. These components include (1) fidelity of scientifically validated, research-based interventions, (2) data-based decision making, and (3) progress monitoring.
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Primary prevention, or Tier I, also referred to as core instruction, occurs in the general education classroom. It encompasses core instructional practices, differentiation, and accommodations. Universal screeners are provided on a periodic basis to all students in order to identify at-risk learners as well as to determine baseline levels. At-risk students in Tier I are provided with supplemental instruction in the classroom for up to eight weeks, and found to be non-responsive, they receive access to secondary prevention, or Tier II (Fuchs, Fuchs, & Compton, 2012).

Within Tier II, students are provided with increasingly intensive interventions based on need. Interventions are evidence based, moderate in intensity, and often provided in a small-group setting. Schools provide this tiered instruction to students in addition to the instruction and support they receive in the general education setting (What is RTI, n.d.). Students who are still not progressing as expected by the end of the intervention period are moved on to Tier III.

Students in Tier III receive intensive interventions that target the deficits that were not addressed in the classroom or Tier II interventions. If during Tier III, students are not making the level of expected progress and therefore are not responsive to the intervention, anyone within the school or the parent is able to refer the child to the special education committee for an evaluation.

Students who do not respond to the intensive intervention support that Tier III provides are referred to the special education committee. At this meeting, the team discusses whether or not there is a need for an evaluation based on a review of the data collected in Tiers I, II, and III. If the evaluation demonstrates the need for special education support, an individualized
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education plan is developed for the student. If at any point a school staff member or parents feel that a child has a disability, a formal evaluation may be requested. The RTI process cannot hinder a formal evaluation for special education (Fuchs et al., 2012). The figure below illustrates the RTI tiered system of support, and what encompasses each level.

Figure 1. Team responsibilities in the inverted RTI pyramid. Reprinted from *Simplifying Response to Intervention* by A. Buffum, M. Mattos, & C. Weber 2012, Bloomington, Indiana. Solution Tree Press. Copyright 2012 by Solution Tree Press. Reprinted with permission.

There are some significant differences between utilizing Response to Intervention prior to a special education referral and the discrepancy model used for identification. With the discrepancy model, the students often need to repeatedly fail prior to getting referred and identified for special education. RTI changes this process, and instead provides early intervention to help meet the needs of students before they fail.
Statement of the Problem

The use of Response to Intervention (RTI) has been on the rise in recent years, as educators look to find ways in which to eliminate the nation's achievement gap. RTI is a multi-tiered system of support for students with academic and behavioral needs. Interventions that increase in intensity are provided to identified students, and progress is monitored throughout. In order for RTI to be effective, students must have access to high-quality instruction as well as frequent progress monitoring through universal screeners or an assessment system in order to determine student achievement. Use of this assessment system helps to determine the intensity of intervention required to meet individual student needs as part of the multi-tiered approach (NASDSE, 2006). Although RTI has not been around for a long time, it has proven to be a systematic way of blending data and resources in an effort to ensure the necessary support for every student (Searle, 2010).

Schools increasingly utilize RTI as a system of support, for seemingly good reason. VanderHeyden and Burns (2010) stated several strengths of implementing an RTI model in their Practitioner’s Guide. These reasons include increased reading skills in at-risk students, more students scoring in the proficient range on standardized tests, improvement in the identification of students in need of special education services, as well as fewer overall students identified as having a specific learning disability when tested through the special education process.

Although RTI appeals to many school districts, others have skepticism surrounding RTI. Ciolfi and Ryan (2011) stated that although RTI is implemented at many schools, no consensus exists on a singular implementation model or set of interventions to be utilized. Along the same vein, Fuchs and Vaughn (2012) noted their skepticism about the implementation of RTI:

What’s less clear is how extensively RTI has actually been implemented in schools and the extent to which those implementations represent tenable prevention models, guided
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by best practices. Issues persist related to implementation and effective use of data sources, procedures, and practices for decision making around these data, as well as viable strategies for differentiating general education classroom instruction and validated methods for intervention. (p. 195)

There is compelling evidence that suggests RTI is advantageous by providing opportunities for all students to learn at high levels by providing them with the necessary support (Burns, Appleton, & Stehouwer, 2005). What seems to be missing is an understanding of how schools implement RTI effectively, utilize data for decision-making, and determine intervention models for their students. The confusion surrounding how to implement RTI leads to misunderstandings and ineffectiveness when implementing RTI.

**Purpose of the Study**

I will use a case study approach to research how RTI was implemented in one elementary school in the mid-Atlantic region. The district administrators and senior staff at Holloway Public Schools (HPS) Central Office worked closely with Solution Tree RTI Presenter prior to rolling out the countywide five-year implementation framework in 2015. As a result, all schools in the district have had three years to develop and implement a RTI intervention period within their master schedule.

As a researcher, I was interested in finding the answers to one major question: how did the subject elementary school implement RTI? Also included in my research are three sub-questions: a) How did the school site utilize data? b) How was progress monitored at the subject elementary school? and c) What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes? The purpose of this study was to examine and explain how one elementary school with a high quality RTI program implemented Response to Intervention while keeping all three essential components in consideration. In order to better understand how the subject
elementary school implemented RTI, I will examine school documents, archived records, and conduct interviews with staff members at the school. I will also utilize the countywide RTI 5-year implementation framework.

**Need for the Study**

Though RTI appeals to many scholars and practitioners, many skeptics feel that more needs to be done before accepting that RTI successfully provides targeted intervention to students. Reynolds and Shaywitz (2009) stated that it is difficult to tell whether or not RTI constitutes a credible service delivery model, or if it is simply another trend in the field of education. Ciolfi and Ryan (2011) discussed that although many schools have implemented RTI, the implementation approach and interventions have not been consistent, so there is no consensus regarding these.

Keith Collins (2014) conducted an in-depth case study on RTI, which looked at how one elementary school implemented RTI, how the school intervened with at-risk students, and the relationship between reading scores in first grade when compared with fourth grade scores. Collins’ well written and comprehensive study laid the initial groundwork for my study, which included conducting a qualitative case study analysis regarding the implementation of RTI in an elementary school. An implication of his study was that schools should consider the limitations of the RTI Models and implement policies that address these to create a Hybrid Approach to RTI. This provides additional evidence that a concern remains over the process of RTI implementation. More clarity needs to be provided surrounding effective RTI implementation, data utilization, and how progress is monitored.

**Definition of Terms**  

**Adequate Yearly Progress (AYP):** “The minimum student achievement levels schools are expected to make annually, according to an accountability system mandated by the No
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**Curriculum Based Measurement (CBM):** “A precise tool for directly measuring student competency and progress in the basic skill areas of reading fluency, spelling, mathematics, and written language” (Buffum, Mattos, & Weber, 2009, p. 206).

**Data-Based Decision Making:** “A process of collecting, analyzing, and summarizing information to answer a question and to guide development, implementation, and evaluation of an action; most importantly, this process is used to answer educational or socially important questions” (Buffum, Mattos, & Weber, 2009, p. 206).

**Early Intervening Services (EIS):** Interventions that are provided to students early on in order to improve their academic performance, prior to referring them to special education. IDEIA 2004 recommends the implementation of EIS (Buffum, Mattos, & Weber, 2009).

**Fidelity:** The degree of accuracy with which an intervention, program, or curriculum is implemented according to research findings and/or its developers’ specifications (Buffum, Mattos, & Weber, 2009, p. 208).

**Progress Monitoring:** A scientifically based practice that is utilized in order to both assess the academic progress of students and evaluate instruction effectiveness. Progress monitoring can be used in a small group or with individual students or whole group (Buffum, Mattos, & Weber, 2009).

**Research Based Instruction:** The use of scientifically validated curriculum and educational interventions (Buffum, Mattos, & Weber, 2009).

**Response to Intervention:** “The practice of providing high-quality instruction and interventions matched to students’ needs, monitoring progress frequently to make changes in
instruction or goals, and applying child response data to important educational decisions” (Buffum, Mattos, & Weber, 2009, p. 210).

**Tier:** A level within a pyramid of interventions that is comprised of interventions and supports for a delineated student group (Buffum, Mattos, & Weber, 2009).

**Tiered Model:** A model that includes a minimum of three tiers that includes and defines levels of instructional interventions based on student skill gaps and need (Buffum, Mattos, & Weber, 2009).

**Universal Screening:** “A process of reviewing student performance through formal and/or informal assessment measures to determine progress in relation to student benchmarks and learning standards; also the practice of assessing all students in a school with valid measures in the major curricular areas, so that no student at risk “falls through the cracks”” (Buffum, Mattos, & Weber, 2009, p. 212).

### Limitations and Delimitations

Limitations are factors that are typically beyond the control of the researcher, and they have the potential to impact the study results or the interpretation of results. It is important to identify the limitations of a study because this helps to provide a process in which to recognize errors or any challenges in interpreting study results. Acknowledging the limitations help readers understand how extensively the research can be generalized (Creswell, 2003).

Given that this is a qualitative research study, the research would be more challenging to replicate because of its occurrence in the natural setting (Wiersma, 2000). The case study format provides the opportunity to explore the implementation of RTI and provide an analysis of individuals and their specific organization (Yin, 2003), which may limit the ability to generalize findings to other groups (Miles & Huberman, 1994). The results from this study may not be
generalizable to all schools that have implemented RTI, however it will be generalizable to schools that are similar to the elementary schools used in the case study.

The primary limitation of this study was that the data gathered throughout the course of the study was self-reported by participants. The school district began RTI implementation during the 2015-2016 school year, and therefore participants were asked to recollect information from several years prior, which could have led to incomplete recollections of facts and experiences. It is important to consider that since all participants were current district employees, there may have been hesitation in some responses due to trepidation that they may be chastised for the manner in which they responded. In order to contend with this limitation, the participants’ names remained anonymous and the data were all coded to ensure they remained undistinguished.

Another possible limitation is that when faculty and staff members were interviewed, they had been recommended by the school administration. Although the principals were asked to choose participants based on their involvement in the RTI implementation process, these recommendations could be a potential limitation because participants were not chosen randomly.

As opposed to limitations, delimitations are those factors that may impact a study, but the researcher usually has some control over these. These can help to describe the boundaries that have been set for the study, as well as describe the scope of the study. Delimitations are restrictions on what the researcher will be doing and help to narrow the extent of the study (Glatthorn & Joyner, 2005).

This study is delimited to include students from an elementary school in one school division in the Mid-Atlantic region. The school district is the recipient of the Medallion of Excellence Award that is presented by the U.S. Senate Productivity and Quality Awards. The elementary site is accredited by the State’s Department of Education according to state accreditation ratings and federal accountability ratings. The entire school district implements
RTI, and the selected site has an abundance of data related to their RTI program. Due to the fact that the study was delimited to one elementary school in one school division in the Mid-Atlantic region, the results from this study may or may not be representative of other elementary schools that implement RTI in other regions.

Another delimitation of this study was that the participants who were interviewed were chosen from three categories: (a) school administration, (b) school faculty and staff members, and (c) central office staff members. The perspectives of the students, parents, or community members were not included in this study. A final delimitation was that the participants who were chosen only included those individuals who had been working at the elementary site or within the district when RTI was implemented, and who were still employed by the school division when the study was conducted.

**Summary**

Student achievement in primary schools can have a significant impact on a child’s educational pathway throughout school. As a result, educators consistently analyze how they can intervene in an effort to help support at-risk students. RTI provides a roadmap to help ensure success for students. However, more research is needed in order to better understand how schools implement RTI, utilize data for decision-making, and monitor the progress of students (Sparks, 2015). This study looks at how one elementary school implemented RTI.
Chapter Two

Review of Literature

This chapter begins by providing a brief history of Response to Intervention (RTI) in the American public school system. It then details the transformations in legislation that have encouraged more school districts to utilize Response to Intervention (RTI) in special education, more specific usually for a specific learning disability (SLD) eligibility. A comprehensive overview of the Components of RTI and RTI models will be provided. Following the overview, current and past research will be detailed, as well as an explanation of the link between grouping and RTI.

Components of RTI

In order to determine if a struggling student was in need of special education supports and services, American public schools have utilized the discrepancy model, which measures the difference between a student’s potential and their actual achievement (Buffum, Mattos, & Weber, 2009). The underlying premise of RTI is the idea that students should not have to qualify for special education before putting supports in place to help them (Buffum, Mattos, & Weber, 2010). Response to Intervention shifts the idea that the special education supports will help enable the child to be successful, and rather places the onus on the entire staff, including both special education and general education teachers. Utilizing an RTI system provides schools with more than an additional way of qualifying students for special education supports. RTI promises a unified system of education, with a focus on meeting the needs of all students (Faust, 2006).

The multi-tiered approach of RTI helps with both early identification and support for students who have learning or behavioral needs (RTI Action Network, n.d.). RTI is not a packaged program with specific guidelines for intervention and implementation, but rather a framework that provides guidance on providing early identification and intervention supports to
students in need. Consequently, schools possess options regarding the implementation of RTI, so variability arises due to the different ways in which schools implement RTI. However, several components remain consistent across most RTI models. The three essential components include: (1) fidelity of scientifically validated, research-based interventions, (2) data-based decision making, and (3) progress monitoring system. (Fuchs & Fuchs, 2001; Buffum, A., Mattos, M., & Weber, C. (2009).

**Pyramid Response to Intervention.** Schools typically subdivide the Multi-Tiered System of Support into three tiers, Tier I, Tier II, and Tier III (Fuchs, Fuchs, & Compton, 2012). The tiered system of support is employed across the school. Each tier signifies a specified intervention level dependent on the ability of the student to access the learning materials (National Center on Response to Intervention, 2010). Students access instruction in a tier, based on their individual learning needs.

Tier I is comprised of core instruction, differentiation, accommodations and if needed, supplemental instruction in the classroom setting (Fuchs & Deshler, 2007; Fuchs & Fuchs, 2006; Lembke, McMaster & Stecker, 2010). The implementation of Tier I instruction is typically aligned with state standards, and it applies to all students within the school. High quality core instruction with a viable curriculum is imperative at this tier. With effective implementation, Tier I instruction should support 75%-80% of students reach successful levels of competency (Shapiro, n.d.).

The focus of Tier II is to identify students who are in jeopardy of achieving poor learning outcomes and provide small group supplemental instruction to these students. Students not responsive to Tier I instruction receive Tier II instruction, as a secondary prevention (Fuchs, Fuchs, & Compton, 2012). Interventions are evidence based and increase in intensity dependent on need. Currently the research recommends a time period of 8-10 weeks when measuring
student progress and response to Tier I supports (McMaster & Wagner, 2007; Fuchs & Fuchs, 2005; Vaughn, Linan-Thompson, & Hickman, 2003). If students are not progressing by the end of this window, the intensity, frequency or duration of the intervention may be increased, or they are moved in to a Tier III level of support.

Tier III is more intensive intervention that provides individualized interventions to students who were not successful accessing instruction within Tiers I and II. These interventions target the deficits that remain after accessing Tier I and Tier II interventions. If students do not make the expected level of progress during Tier III, they are referred to the special education committee for an evaluation.

Academic interventions become more intensive as students move across tiers; whether in duration, frequency, student grouping, instructor qualifications or use of instructional strategy (Fuchs & Fuchs, 2006; National Research Center on Disabilities, 2006). Student movement across tiers is fluid. As students experience academic success or alternatively become unresponsive to the intervention, they are assigned to an appropriate tier (Lembke et al., 2010).

**Fidelity of research-based interventions.** After a student is placed in a Tier II or III intervention, (1) the student experiences success in the area of their skill deficit and moves back into Tier I instruction in the general education classroom; (2) the student demonstrates progress, but remains in need of the intervention and therefore remains in Tier II or III; or (3) the student requires such a significant degree of support that a referral to special education is warranted (National Research Center on Disabilities, 2006). Due to the fluidity of the movement within tiers, educators must have a wide range of tools when identifying interventions that will meet the individual needs of students. Access to research regarding interventions, as well as identified Tier I, Tier II, and Tier III interventions, help support schools with the implementation of interventions that support students in each of the tiers.
After an intervention has been designated, implementing it with fidelity becomes of significant importance. Both proponents (e.g., Glover & DiPerna, 2007; Kovaleski, 2007) as well as critics (Reynolds & Shaywitz, 2009) of RTI have recognized that fidelity of implementation should be monitored when implementing the prescribed interventions. Fidelity of implementation is one of the most important components when implementing RTI (Burns & Gibbons, 2008; Kovalewski, 2007; Shinn, 2007). The National Research Center on Learning Disabilities (NRCLD) has issued several documents that discuss fidelity of implementation including information on screening and implementation procedures (NRCLD, 2006). They list frequency, method, and support systems as the means of monitoring fidelity and suggest that checks should be both predictable and unpredictable, to ensure that the data collection is reflective of the intervention implementation (NRCLD, 2006).

Research has shown that schools sometimes fail to implement RTI with fidelity. A study completed by Skelding-Dills (2013) looked at how one high school implemented the essential components of RTI and whether the framework was implemented with fidelity. Study participants who were interviewed indicated that screening tools designated in the literature were not the ones being utilized in their school. Participants also noted that while they did collect data and monitor student progress, the process was not consistent throughout the school. Due to these inconsistencies, participants stated that the multi-tiered RTI system implemented at the high school lacked evidence-based practices and interventions, which led Skelding-Dills to conclude that the high school did not implement RTI with fidelity. A review of records showed that through RTI implementation, there was only a marginal improvement in student grades, dropout rate, and standardized test scores (Skelding-Dills, 2013).

Fuchs and Deshler (2007) note the importance of using procedures that help to promote implementation fidelity when implementing RTI. RTI has high quality components, but for it to
be effective, it must be guaranteed that interventions are implemented with fidelity (Noell & Gansle, 2006). When implementing an intervention, student progress must be monitored so schools are able to determine its effectiveness. Progress monitoring is utilized in order to assess student progress in the areas of need identified by a universal screener.

**Progress monitoring.** Schools use progress monitoring not only to track students’ academic progress and performance, but also to identify their rate of learning. Schools monitor progress by giving assessments at regular intervals (e.g. weekly or bi-weekly) in order to monitor student responses to Tier I, II, or III instruction. Students who are not demonstrating adequate progress are identified and placed in an appropriate tier. Jenkins et al, (2007) stated that there are two methods to determine Tier II status: Direct and Progress Monitoring. According to Fuchs and Fuchs (2006), progress should be monitored at minimum one time per month, but ideally biweekly or even weekly.

**Direct method.** In the direct method, a universal screen is given to students one time at the beginning of the year. If a student performs below a predetermined cut point, the students move directly into Tier II interventions. Vellutino et al. (1996) and VanDerHeyden, Witt, and Gilbertson (2007) provided students with a screening measure. Those students that were deemed at risk immediately began Tier II interventions. The rationale behind the immediate move was that if a student was designated “at risk,” then continuing to monitor their progress will only delay the implementation of an intervention. A potential benefit of the direct method is at-risk students are identified quickly, which allows them to gain access to interventions immediately (Jenkins et al., 2007; Vellutino, et. al., 1996). The difficulty with utilizing the direct method is that students are identified and moved into Tier II based on one piece of evidence, which may not be the best indicator of a child’s ability. Deno and Mirkin (1977) give instructional standards for use with Curriculum Based Assessment (CBM) and Curriculum Based Measurement (CBM)
assessments in order to determine whether a classwide or individual intervention is necessary. However depending on the assessment used, the direct method could potentially result in misplacement of a student.

**Progress monitoring method.** While the direct method utilizes data from one assessment to place students in Tier II, the Progress Monitoring approach follows different guidelines. In this method, students are given universal screeners, after which all at-risk students are monitored for an additional period of time prior to being moved into the Tier II intervention group. Although the progress monitoring method is a dependable assessment measure when compared with a singular ‘one-shot’ assessment, Hughes & Dexter (n.d.) believe that it postpones interventions for students who need significant support.

Compton, Fuchs, Fuchs, and Bryant (2006) conducted a study in an attempt to improve the accuracy of risk classification. Their study determined whether or not adding word identification fluency and five weeks of progress monitoring helped to enhance the process in which reading disabilities were predicted. The researchers initially identified 252 first grade students with low initial reading skills for their study participants. Students were selected from 42 first grade classrooms in 16 schools in Tennessee. To select their final sample, two assessments in word identification fluency (WIF) and rapid letter naming (RLN) were administered to all students in the original sample. After the two tests were given, the students were ranked based on the data. The six lowest performing students and three alternates in each classroom were identified, with the approval of the classroom teacher.

The sample was followed longitudinally from the fall of the students’ first grade year through the end of their second-grade year. Two hundred eight of the original two hundred fifty-two students remained at the end of the study. Progress monitoring through a WIF assessment occurred for five consecutive weeks at the beginning of the study. The study concluded that
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augmenting screening assessments with progress monitoring resulted in a marked improvement in classification accuracy.

Speece (2005) looked at two cohorts of first graders to determine whether or not progress monitoring measures collected two times throughout the year, as opposed to relying on measures administered only once, helped to identify students who qualified with a reading disability in the spring. Speece screened 679 first grade students in the fall to identify students who were both at-risk and not at risk. At risk was identified as a student falling in the bottom 25% of student scores in their classroom. 140 at risk students were ultimately identified. At the end of the study, Speece (2005) determined that many of the at-risk students ended up being “false positives” as a result of showing growth despite expectations after the assessments were given. Where Compton et al (2006) found that five weeks of progress monitoring improved the screen accuracy, Speece (2005) did not find the same improvement when utilizing progress modeling to monitor students.

In the direct model, students have access to Tier II interventions immediately since the process isn’t hindered by the multiple observations of progress monitoring. One limitation of the direct model method is that after the screening measure is issued once, it presumes that true positives are highly accurate. (Hughes & Dexter, n.d.). On the other hand, progress monitoring seems to be more of a reliable measure of progress as it is based on a series of assessments rather than just one. However, progress monitoring adds to the delay in the time it takes for a student to access interventions (Hughes & Dexter, n.d.). Due to conflicting research and a lack of consensus, school districts are left to their own devices when it comes to choosing a method, which adds to the lack of consistency in RTI implementation.

Once a determination has been made, schools need to select a tool that will be utilized to screen students. Any progress monitoring tool or universal screener that a school district utilizes should be easy to utilize and short, as its purpose is to help identify students. Curriculum Based
Measurements (CBM) are commonly used as they have nearly 30 years of empirical evidence that demonstrates they are both a valid and reliable indicator of student academic progress (Foegen, Jiban, & Deno, 2007; McMaster & Espin, 2007). Christ & Hintze (2007) state that utilizing CBM is the most promising method used when assessing academic performance in the RTI model.

**Curriculum based measurements.** Stecker & Lembke (2005) state “CBM is a scientifically validated form of student progress monitoring that incorporates standard methods for test development, administration, scoring, and data utilization” (p. 3). When utilizing CBM, teachers have access to standardized measurement and evaluation procedures and can use these tools to help make determinations regarding the instructional programming used for students (Deno, 1985). This helps to ensure that the data received from the CBM is a valid and reliable marker of a student’s ability level (Deno, 2003; Wright, n.d.). In a short time, CBM can predict whether an intervention is working or should be changed.

As opposed to using time consuming norm referenced reading assessment tests, teachers can utilize CBMs in Reading (CBM-R; Deno, 1985), which are quick to administer and sensitive to a student’s growth in reading. Some common print-based CBM-R progress monitoring assessments include Nonsense Word Fluency, Letter-Sound Fluency, and Letter-Naming Fluency. While these are considered single-skill measures, Word Identification Fluency embeds multiple skills, for example, decoding and sight-word recognition. When choosing the reading measurement assessment, the information generated by the assessment, the benefits of utilizing this form of measure with the student population, and any resources needed to support implementation should be considered (Stecker & Lembke, 2011). Given their reliable nature, CBM-Rs are often used to monitor progress and help teachers evaluate the effectiveness of instruction. These measures are given frequently to determine student growth and allow
educators access to data that will lead to modifications or alterations in a student’s instructional program.

**Data-based decision making.** Data analysis is crucial and takes place not only at the school and grade level, but also at the state and district level. Analyzing data is also essential throughout all three tiers of RTI. Utilizing progress monitoring helps school leaders and educators analyze data, and make instructional decisions, as well as determine students in need of additional support (National Center on RTI, 2010).

Steckler, Fuchs, and Fuchs (2008) stated that when selecting core programs and instructional practices and strategies, it is critical to RTI that these demonstrate effectiveness when working with students who have a wide range of ability levels. Instructional programs and procedures should be analyzed. Teachers may need additional support through professional development or coaching to ensure the presence of school-wide fidelity in instructional practices (Steckler et al., 2008). Schools need to be able to aggregate and analyze universal screening measures and progress monitoring data to evaluate core curriculum and instructional and behavioral strategy adequacy and effectiveness. This helps to determine whether or not the curriculum and strategies are appropriate in order to best support and meet the needs of the students (RTI4success, n.d.).

Each tiered support “dose” should be between 6 to 8 weeks, with the number of sessions varying depending on which tier the intervention is taking place in. With sessions lasting 30 minutes, Tier II interventions should occur at least 3 days per week while Tier 3 interventions should occur daily. Programs utilized may vary from school to school, but should be explicit, intensive, and specific to individual student needs (Buffum, Mattos, & Weber, 2009).

A study completed by Wanzek and Vaughn (2008) demonstrated the importance of schools using data to assess intervention effectiveness, to make decisions regarding future
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implementation. First grade students at-risk for reading difficulties were randomly assigned to either a treatment or comparison group and participated in a reading intervention during the fall of their first grade year. Students were provided with 30-minutes of daily reading intervention for 13 weeks. After the completion of these 13 weeks, students who had shown inadequate response to the intervention were provided with a continuation of the reading intervention throughout the spring. Students in the treatment group were split into two study groups and continued to receive the same reading intervention, with study one students receiving reading intervention for 30 minutes per day and study two students receiving reading intervention for two 30-minute sessions per day.

When the treatment group was compared against students in the comparison group, more students in the treatment group demonstrated gains on Word Identification, Word Attack, and Passage Comprehension when pretest and posttest measures were analyzed. When the students who received 60 minutes of intervention in the spring were compared with students who received a repeat of the 30-minute intervention in the spring, students who received additional time during their intervention showed an increased response to the implemented intervention. The results demonstrated a lack of effectiveness when providing the same intervention to students who previously participated in the reading intervention (Wanzek & Vaughn, 2008). When students do not respond to an implemented intervention, school teams must review data in order to make data-based decisions regarding different instruction and intervention.

Time, intensity, and frequency required for interventions are important considerations in RTI. The results in the Wanzek & Vaughn (2008) study demonstrated that low responding students did not benefit from the same intervention being provided to them a second time, only 60 minutes in Study Two as opposed to 30 during Study One. Rather, students required different interventions that addressed the reasons why they did not respond to the initial intervention. In
the case of Wanzek & Vaughn (2008), providing students with the same intervention for a second time and expecting different results is not reasonable. To ensure that schools are not falling into this pattern, the data from school-based interventions must be continuously reviewed so that any necessary instructional changes that impact time, frequency, and intensity of interventions can be made.

**Response to Intervention Models**

When considering the resources and intervention level a student may need due to failure to respond adequately to instruction and intervention, schools utilize a protocol to determine how best to respond to individual student needs. Schools choose one of two protocols: the problem-solving protocol or the standard protocol. Some schools may also choose to incorporate features of both standard and problem-solving protocols (Barnes & Harlacher, 2008). The standard protocol model involves students being provided with a specific amount of additional instruction in a small group setting. The other students in the group will be receiving the same intervention at the same time.

On the contrary, the problem-solving protocol involves a problem-solving team determining and designing an individualized intervention for students based on need. While the standard protocol is a set and specific, the problem-solving protocol is unique and individualized to each student (Barnes & Harlacher, 2008). A hybrid model allows schools to utilize features from both the standard protocol model and the problem-solving model (Barnes & Harlacher, 2008).

**Standard Protocol.** Buffum, Mattos, & Weber (2009) explain that using pre-established qualification criteria, students are placed in intervention programs. Intervention programs within the standard protocol approach are typically not within the instructional classroom (Fuchs & Fuchs, 2006). In the standard protocol model, schools utilize one intervention for an area of
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deficiency, so students with a reading fluency deficiency would all be placed in the same fluency intervention. Specialists train staff implementing interventions on one program per area of need. Student progress within these Tier I interventions is monitored for a set period of time. Students who respond to the intervention can be moved back into the core instructional program, whereas students who are not responsive move on to a Tier II intervention. If a student is still unresponsive after additional intervention in Tier II, the student will be moved into a Tier III intervention or, if it is thought that the student may have a learning disability, a referral to special education may be warranted. In this case, data from previous interventions would help to support the referral (Fuchs & Fuchs, 2006).

In the standard protocol model, the teacher training along with managing program implementation and fidelity are not as complex. The process of meeting as a team to discuss student plans are efficient, and the progress monitoring component is straightforward (McCook, 2006).

**Problem-Solving Model.** Buffum, Mattos, and Weber (2009) describe the problem-solving model as one that uses staff input in order to develop more individualized intervention plans for students. These learning plans are individualized based on student need and do not rely as much on strict cut points, as the standard protocol model does. For example, the standard model would require students who read less than 20 words per minute as set criteria to receive a predetermined intervention. In the problem-solving model, students slightly below and above the cut point would be diagnosed individually in order to determine their individual needs. Because teacher expertise is valued when making diagnostic decisions, teachers may have a greater chance of accepting the chosen intervention. This model typically occurs within the instructional classroom (Fuchs & Fuchs, 2006).
As more programs are considered in order to meet the diverse needs of students, additional teacher training is necessary to build an understanding of the instructional programs. This poses a challenge when considering progress monitoring and fidelity of implementation. Principals and specialists alike may need to add time to ensure that staff members implement the programs uniformly across the building.

Many RTI manuals recommend a blended approach, incorporating features from both the problem-solving model and standard protocol model systems. The blended model includes determining student needs, development and implementation of a plan, and plan evaluation (Buffum, Mattos, & Weber (2009). Regardless of model, Fuchs & Fuchs (2006) state that students should have access to instruction that increases in intensity with a progress monitoring system that assesses student growth, and allows non-responsive students to access a more intensive tier within the system.

**Grouping**

A consistent theme in education, specifically in reading, is how to ensure effective instruction. There has been a lot of research on dividing students within a classroom into instructional groups, whether homogeneous ability groups, or heterogeneous mixed ability groups. (Chorzempa & Graham, 2006). A review of literature by Kulik and Kulik (1987) and Slavin (1987a) demonstrated positive impacts of ability grouping when utilized for various educational tasks. Advocates and opponents for ability grouping have found both advantages and disadvantages in using ability groups. Ability grouping has two arrangements that are consistently recognized; between-class grouping and within-class grouping. Between-class grouping occurs across a grade level, ultimately forming a homogeneous classroom, whereas within-class grouping takes place when a heterogeneous classroom breaks students into small, homogeneous groups for instructional purposes (Slavin, 1987).
**Between-class.** Although a literature review by Slavin (1987) found six forms of between-class ability grouping. For this review, we will delve deeper into the following three methods: ability, regrouping for reading/math, and the Joplin Plan.

When students are ability grouped, they are placed in self-contained classrooms based on their academic achievement or ability. These ability-based classrooms are developed by achievement scores, IQ, and/or teacher judgment. Regrouping for reading/math is another common ability-grouping model, where students are placed in heterogeneous classes for most of the day with the exception of regrouping for specific subjects. The Joplin plan groups students according to instructional reading level, regardless of grade level. Slavin’s (1987) review of literature determined that a specific set of guidelines made ability groupings more effective. These guidelines include:

1. Students remain in heterogeneous classes most of the day and are regrouped by performance level only in such subjects as reading and mathematics in which reducing heterogeneity is particularly important.
2. The grouping plan reduces heterogeneity in the specific skill being taught.
3. Group assignments are flexible and are frequently reassessed.
4. Teachers adapt their level and pace of instruction in regrouped classes to accommodate students’ levels of readiness and learning rates. (Slavin, 1987, pp. 116)

**Within-class.** The review of literature completed by Slavin (1987) showed that the within-class ability grouping plans also coincide with the four above requirements. These groupings occur during reading and/or mathematics, and for the remainder of the day students are participants in relatively heterogeneous classes. Professor John Hattie has synthesized the
findings from 1,500 meta-analyses of 90,000 research studies and 300 million students in order to develop a model of learning for how to improve student learning outcomes. After finding the average effect size of interventions to be 0.40, he based the success of all influences on this data point, or ‘hinge point’. Hattie found that RTI had an effect size of 1.29. Hattie’s research also showed that within class grouping had an effect size of 0.18, and that the within-class ability groups outperformed mixed ability groups in reading (Visible Learning, 2018).

Within-class grouping does present challenges different than those of between-class grouping. One specific challenge is related to classroom management of multiple groups due to the teacher working with one instructional group at a time. The remainder of the students need to work independently on seatwork while small groups are taking place, and the multiple groups and transitions required can lead to management concerns. (Anderson, Brubaker, Alleman-Brooks, & Duffy, 1985).

Slavin’s (1987) research found mastery learning and cooperative learning to be two common types of within-class ability grouping. In mastery learning, students are assessed and the data is analyzed to determine student instructional level. The rate and level of instruction determines the homogeneous groups that students are placed into. Alternatively, cooperative learning consists of heterogeneous student groupings that serve to motivate students to become more organized and work collaboratively when learning material.

**Reading Grouping Research**

The practices that a teacher uses to group for reading instruction can serve as a critical component in the effective implementation of reading instruction, Maheady (1997) made reference to the fact that grouping is an adjustable instructional consideration that can powerfully influence, either positively or negatively, student engagement and academic progress. This
practice, often referred to as tracking, can become more obvious as students’ matriculate through their middle and high school years (Research spotlight, n.d.).

Opponents of homogeneous reading groupings criticized this practice stating that same ability grouping lowers self-esteem and motivation, specifically in poor readers, and widens the achievement gap between good readers and poor readers (Hiebert, 1983; Rosenholtz & Wilson, 1980). Findings from Vaughn (2001) showed that when students were ability grouped, the students in the lowest performing group received instruction inferior to the instruction that higher-level students received. Allington (1980) found that reading instruction was of a lower standard regarding the time that students spent reading, discussing, and comprehending the literature, while Juel (1988) found the appropriateness of selected reading materials to be of lower standard. Slavin’s (1987) research also noted that opponents felt that ability grouping was disadvantageous to lower achieving students because they faced a slower instructional pace than their peers and did not have access to peer models in their group.

Most concerning, however, is placement decisions in kindergarten can significantly impact a child’s trajectory for their academic year, and consequently their career. Researchers have found that teachers have lower expectations for the students in lower ability groups, which in turn influences their level of achievement. As they move through subsequent years, teachers use the kindergarten teacher’s placement decisions and data from the kindergarten year, which continues the cycle that began in kindergarten (Robinson, 2008). A study conducted by Hargreaves (1997) stated that students of lower academic ability had lower self-esteem coinciding with increased irresponsible and delinquent behavior. George (1993) also stated that lower performing students who are continuously grouped together have negative attitudes towards school by the time they enter middle school.
Proponents, on the other hand argue that high-achieving students suffer when placed in mixed ability classes, as it is unmanageable for a teacher to instruct students in high level literary components and phonics synchronously (Loveless, 1999). Slavin (1987) and Kulik (1992) both concur that within class ability grouping studies are positive, while ability grouping across grade levels have increased achievement at the elementary level. Kulik (1992) also stated that there is little research to suggest that ability-grouping impacts a student’s self-esteem negatively. Rather, when a low performing student is placed in heterogeneous classes, their performance is consistently compared to their high achieving peers, which may be humiliating on a personal and social level.

Steenbergen-Hu, Makel, & Olszewski-Kubilius (2016) shared findings from their two second-order meta-analyses analyzing 100 years of grouping research. The outcomes of the ability grouping meta-analyses showed that students did benefit from both within-class grouping and cross-grade subject grouping. Students of all ability levels, low, medium, and high, benefited equally from ability grouping. Between-class grouping did not have the same benefits, as results were negligible.

When implementing a grouping model, several factors should be in place to ensure success. Students should not be placed in one group for the duration of an instructional day and should have access to flexible grouping based on the need for more challenging curriculum or more support. Robinson (2008) found that regrouping reading students to ensure access to small-group, level-appropriate instruction had a significant and positive impact on student achievement. Students should be able to interact with students in diverse learning groups throughout the day. Initial placement in groups should not be based on a single standardized test, rather testing scores in correlation with reading assessments, anecdotal data, and teacher recommendation.
**Reading Grouping and RTI**

The research on reading grouping is pertinent to RTI, as instruction is delivered at the student’s instructional level based on need. This often results in small group instruction based on skill level. Schools often utilize within-class grouping as it has been effective at improving reading achievement in students (Luzio & Colby, 2010). It is important that schools review and utilize this reading grouping research, including the strengths and weaknesses regarding grouping. This research should be considered as schools begin grouping for RTI, as it is necessary to consider all factors prior to grouping and beginning instruction.

**Why Further Research on RTI is Necessary**

Response to Intervention has shown considerable success over the years. A study conducted by Torgesen (2007), stated that strong classroom instruction combined with vigorous interventions is essential. His study was one of the first that corroborated RTI as a method to increase student achievement school-wide. When the state of Florida attempted to implement the Reading First Program in 318 elementary schools, their focus was on providing students with high quality instruction, making sure they were utilizing universal screeners as well as progress monitoring, and moving students between Tiers when access to interventions was necessary (Torgesen, 2009). After three years of implementing Reading First with an RTI focus, there were significant reductions in the number of students identified as having a Learning Disability under Special Education. They also noted a decrease in students scoring below the 20th, 10th, and 5th percentiles on standardized tests (Torgesen, 2007).

While Response to Intervention successes are notable, the research suggests that consistency of implementation across settings is lacking. A study completed by Shepherd and Salembier (2011) states that there is no consensus on a single model of
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implementation. Mastropieri and Scruggs (2006) note that at the present time, RTI does not have clear requirements, and that the teacher's role in RTI is disparate and open to interpretation. Due to this ambiguity, RTI presents significant challenges for schools that are attempting to implement the model with fidelity.

Implementing RTI with fidelity, or using the curriculum as well as instructional practices correctly and with consistency is crucial to its success. If interventions are not implemented consistently or with precision, a school district will be unable to explain a student’s positive response or on the other hand, lack of response to intervention. Students outcomes are not able to be linked to instruction (Mellard, 2010). Due to the lack of consistency in implementation, school districts ensure fidelity using a variety of methods. When interventions are implemented with fidelity, the intervention effectiveness increases substantially. In order to better support school districts in their efforts to monitor fidelity, more research needs to be done to identify practices such as progress monitoring and universal screeners, which help to ensure fidelity.

With regard to universal screening approaches, additional research comparing screening approaches that utilize similar criteria is necessary in order to determine the validity of these tools when looking to identify at-risk students (Jenkins, 2003). Universal screening is essential to identifying students who are at-risk and ensuring that they receive access to intervention supports to address academic or behavioral weaknesses. Additional research may provide schools and school districts with a way to ensure that the appropriate tools are being used to accurately identify at-risk students.

Monitoring student progress is essential to the success of RTI. Whether monitoring progress after giving an initial assessment to determine student needs or determining that a student is not responding to Tier 3 instruction and needs to be referred
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for special education testing; monitoring student progress is imperative to RTI. There are many ways in which student progress may be monitored, and school districts need additional support in identifying methods for monitoring student progress as well as accessing universal screeners that are appropriate for their student population.

RTI has evolved from a method of identifying students with LD, to a potential means of achieving success for all students. Research has proven that RTI can be successful. In order to further validate this method, more research needs to be conducted to demonstrate effective implementation. Areas of focus should include recommendations for successful implementation, methods of monitoring student progress and determining movement between tiers, and universal screeners utilized. Additional research should produce clearer guidelines and recommendations for successful implementation and help to address many of the criticisms of RTI. As more research is compiled that supports RTI, we can look to fully utilize RTI and embrace it as a model that seeks to support the learning and growth of all students.
Chapter Three

Methodology

Students performing below grade level in lower elementary school are likely to continue this trajectory of performing below grade level as they move throughout their school career (Samuels, 2015). Due to the achievement gap and federal regulatory changes, schools have made increased efforts to improve the academic outcomes of low performing students. Response to Intervention (RTI) has been recognized as an educational framework to help identify and support those students achieving below grade level (National Center for Learning Disabilities, n.d.).

Schools increasingly utilize RTI as a system of support, for seemingly good reason. VanderHeyden and Burns (2010) stated several strengths of implementing an RTI model in their Practitioner’s Guide. These reasons included increased reading skills in at-risk students, more students scoring within the proficient range on standardized tests, improvement in the identification of students in need of special education services, as well as fewer students identified as having a specific learning disability when tested through the special education process. While Response to Intervention successes are notable, research suggests that consistency of implementation across settings is lacking.

The three essential components of RTI include: (1) fidelity of scientifically validated, research-based interventions, (2) data-based decision making, and (3) progress monitoring system (Fuchs & Fuchs, 2001; Buffum, A., Mattos, M., & Weber, C., 2009). The purpose of this study was to examine and explain how one elementary school with a high quality RTI program implemented Response to Intervention while keeping all three essential components in consideration. In order to get a better understanding of how the site executed the RTI process, I conducted a qualitative case study and utilized qualitative data as I answered how one subject
elementary school site implemented RTI, and how their implementation related to the current research surrounding Response to Intervention.

Research Questions

1. How did the subject elementary school implement RTI?
   a. How did the school site utilize data?
   b. How was progress monitored at the subject elementary school?
   c. What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes?

Research Design

The research design for the proposed study was a qualitative case study designed to answer the research questions. The qualitative research design allowed me to examine the case in a multitude of ways. I gathered data through a review of school documents, interviews, and a review of documents from the school district. I interviewed school personnel in order to examine how RTI was implemented at the subject elementary school, learn about the experiences of the school staff during RTI implementation, and understand how the implementation at this site connected with the research and literature on RTI.

Stake (1988) described case studies as intrinsic, instrumental, and collective. He added that the intricacy of the phenomenon being investigated should be portrayed (Stake, 1995). A case study allows for more flexibility than other qualitative approaches, as the research findings develop from the themes inherent in the study data (Denzin & Lincoln, 2011b). Creswell (2018) explained that a researcher chooses a case study when he/she is developing an in-depth description and analysis of a phenomenon. Utilizing multiple sources of data helps to ensure an in depth understanding of the case being studied (Creswell, 2007; Stake, 1995).
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Case studies are the “preferred method when (a) “how” or “why” questions are being posed, (b) the investigator has little control over events, and (c) the focus is on a contemporary phenomenon within a real-life context” (Yin 1994, p. 4). Yin (2003) stated that if you have a research question focusing on “how” or “why”, case studies can be a beneficial model for researchers to use as they provide a more complete look at real life events.

A case study was appropriate in this research since this study of RTI implementation met the criteria discussed above. I investigated how RTI was implemented at one elementary site, focusing on the implementation of RTI, as well as how the school site utilized data and monitored the progress of their students. The implementation efforts of the elementary school were documented. Through the use of staff interviews and document reviews, this case study was designed to ascertain how one school site utilized data and progress monitoring tools to help support their RTI efforts.

Selection Procedures

I analyzed several variables when studying RTI implementation, so it is imperative to explain how final conclusions were developed from the research questions. The information below describes how I selected the site and how data were collected and analyzed.

Site selection. The setting for this study was an elementary school within Holloway Public Schools (HPS) in the mid-Atlantic region. HPS was home to over 25,000 students as of 2017 (State DOE, 2017). Almost 50% of the students served by HPS are Caucasian. The Hispanic subgroup represented around 30% of the district’s population. The percentage of Black and Asian subgroups served by HPS are both around 10%, while students with two or more races comprises slightly over 5% of the population. Around 15% of students within HPS are categorized as students with disabilities, while around 30% are economically disadvantaged and 30% are English language learners.
Since my research efforts focused on an exemplary school in terms of RTI implementation, I looked to find a school that implemented RTI well. Given the importance of effective implementation, the district RTI Coordinator recommended that I study Chesterbrook Elementary School (CES). A strong implementation of RTI and available documents regarding RTI implementation were the primary selection criteria when identifying the research site. The RTI Coordinator recommended the selected site because of her perception that the site had implemented RTI effectively, and that CES would be able to provide all necessary data for this research study. Further research into the school site was necessary and approval was gained before the final site selection occurred.

**Participant selection.** The individuals who were selected to participate in the study had a role or direct experience throughout the implementation of RTI at CES. The District Coordinator of RTI was invited to participate in the interviews because of her direct role in the implementation of RTI across HPS. The administrators at the site were also asked to participate in the interviews and share their experiences with RTI implementation within their own building. They were also asked to recommend school-based staff members who were directly involved in the implementation to be interviewed.

**Data Collection**

Patton (2002) stated that utilizing multiple data sources can help to provide additional strength to research that seeks to understand a phenomenon. Yin (2013) concurred that data should come from multiple sources. Therefore, I utilized multiple sources of evidence as I worked to collect data including school level documents, district level documents, and interviews.
**Documents.** Written data were collected during the research process, including a variety of records and documents. Documents included a five-year RTI framework, RTI videos, intervention protocols, as well as flow charts and infographics. An RTI course created and placed on the Canvas Learning Management System online was also available as a resource to staff across the district.

Documents from the committee that helped to plan the RTI implementation at CES were accessed, which helped to better understand the administrative team’s thinking when organizing and preparing to implement RTI. Other documents that were reviewed include Collaborative Learning Team (CLT) minutes, which provided information regarding the decisions made for students based on data. An English Language Arts and Math spreadsheet that demonstrated how Chesterbrook monitored the progress of their students prior to receiving intervention and throughout the intervention process was also reviewed.

**Interviews.** Interviews were the primary source of data collection throughout the process. Throughout the interviews, participants had the opportunity to share their experience with RTI implementation, as well as their opinion of how the implementation went. Participants were able to provide their insight into the RTI implementation process.

Prior to interviewing any of the study participants, I completed two separate field test interviews using the methods that were later utilized in my interview protocol. I completed the field test interviews at two separate elementary school sites, interviewing a school principal and a first-grade teacher. Both schools were within the Holloway school district. The sites at which I field tested the interview protocol implemented RTI during the same school calendar year as CES, so they possessed a degree of similarity to CES.
Successful RTI Implementation

The field testing enabled me to be better prepared for the actual interviews. They served as a trial run for the interviews and allowed me to better anticipate any challenges that could occur during the interview process. I followed the same protocol by recording and transcribing the field test interviews, and I then provided both participants with an opportunity to member check their transcript. After each of the participants had been given an opportunity to review their interview, I met with each individually and asked for feedback regarding the interview process. Their suggestions were considered when determining what changes needed to occur prior to the research study interviews.

**Interview protocol.** Along with the current research on RTI, my experience with RTI at the elementary level as well as my administrative experience leading an RTI committee and implementing RTI helped me to develop a protocol that focused on RTI implementation at the elementary level. I interviewed several recommended staff members and the administrative team from Chesterbrook as well as one central office staff member. I began the interview process with the RTI Coordinator, then the administrators at Chesterbrook, prior to interviewing the staff members at the school site. Each participant was contacted by two methods including phone and email. After contact was established, I sent each participant the interview protocol and a letter detailing my research. I also obtained consent prior to beginning each interview. Each participant was interviewed once for up to one hour. The interview questions focused on the RTI fundamentals, interventions utilized, and each participant’s role in the CES RTI implementation. Data were recorded via two recording devices. In addition, I also took notes throughout the interview. Interview questions can be found in Appendix C.

After the interview was transcribed, I provided each participant with a copy of their interview transcription for member checking purposes. Some interviewees chose to
opt out of reviewing their transcript, and in this case their interview transcription was not provided to them. Curtin and Fossey (2007) stated that member checking provides interview participants the opportunity to review and approve their interview transcription prior to the researcher moving forward with their interview data. If they opted to review the document, participants were able to edit the transcript whether to clarify, elaborate, or remove data, which helps to assure data trustworthiness (Creswell, 1995).

Data Analysis

This section discusses how I analyzed the data I gathered. I will discuss the documents first, then the interview data.

Document review. Merriam (1988) cited the importance of authenticity when analyzing documents as part of case study research. In order to determine the origin of the document, as well as the purpose, accuracy, context, and author, I utilized the document analysis protocol that Collins (2014) utilized in his study, which was adapted from Merriam, 1988.

- What is the history of the document?
- How did it come into my hands?
- What guarantee is there that it is what it pretends to be?
- Is the document complete, as originally constructed?
- Has it been tampered with or edited?
- If the document is genuine, under what circumstances and for what purposes was it produced?
- Who was/is the author?
- What was he trying to accomplish? For whom was the document intended?
What were the maker’s sources of information? Does the document represent an eyewitness account, a secondhand account, a reconstruction of an event long prior to the writing, an interpretation?

What was or is the maker’s bias?

To what extent was the writer likely to want to tell the truth?

Do other documents exist that might shed additional light on the same story, event, project, program, context? If so, are they available, accessible? Who holds them?

**Interview data.** Throughout the interview and data collection process, a lot of data were gathered. I coded all interviews in the same manner utilized during the document review protocol (Merriam, 1988) to ensure consistency, as well as support triangulation. I also followed a coding system similar to the one utilized in Collins (2014) when reviewing data. The color coding method helped to better organize text into categories. The categories aligned with the three essential components of RTI which include: (1) fidelity of scientifically validated, research-based interventions, (2) data-based decision making, and (3) progress monitoring system (Fuchs & Fuchs, 2001; Buffum, A., Mattos, M., & Weber, C., 2009). The color codes were as follows: blue denoted progress monitoring, yellow denoted data-based decisions, purple denoted any documentation regarding fidelity, pink denoted interventions, and green was utilized if anything outside of these categories was discussed. If a document pertained to more than one category, multiple codes were used to represent this.

During the interviews, I asked questions regarding the background of RTI at the selected site, fundamentals and implementation, and interventions utilized. I utilized a semi-structured interview protocol when conducting interviews with the RTI Coordinator and school-based administrators and staff. All interviews were coded using the above coding system and helped to support triangulation.
IRB and Confidentiality

Human subjects were used in my study and therefore a Virginia Tech Institutional Review Board (IRB) plan was submitted to the Virginia Tech IRB prior to beginning research. After the Virginia Tech IRB Board reviewed the study, they provided an authorization letter to communicate that the study was ready for Western Institutional Review Board (WIRB) Review. Upon WIRB approval, the approval letter was submitted to Virginia Tech. The IRB authorization letter from the Virginia Tech IRB Board as well as the WIRB Approval letter are included in Appendix B.

In order to conduct research at an elementary school within HPS, I submitted a Research Study Request that was reviewed by a research approval panel within the Evaluation Department. The research application included the Study Description, Abstract of the Proposed Study, Study Description for the HPS website, IRB Approval Verification, and a letter of Authenticity from Virginia Tech. Once the research panel reviewed and authorized the application, a letter was provided to me that granted approval for my study to be conducted at the selected site within HPS. Copies of the HPS research application and correspondence with the review panel can be found in Appendix A.

This research is sensitive in that school and central office staff were interviewed. In order to keep the identity of the school, district, and participants confidential, pseudonyms were utilized for people, places, and organizations.

Following approval, I spoke with the school administrators in order to gather a list of personnel that were actively involved in RTI implementation at the selected site. I asked for several recommendations of individuals that were directly involved in the implementation and have continued to support RTI at Chesterbrook since the implementation. I requested names and email addresses of each recommended individual so that I could begin scheduling interviews.
Successful RTI Implementation

These individuals at Chesterbrook Elementary School as well as the Director of Response to Intervention served as the participants selected to be a part of this study.

I then contacted the school-based individuals by phone and email and spoke with the Director of RTI in person as we both work at the Central Office of HPS. The IRB approved informed consent form was used as a script when discussing the research with each participant. The study rationale and purpose as well as the methodology of the study were reviewed with each participant as well. After the initial phone conversation, the interview protocol and a letter detailing the research as well as a written consent was provided to each participant at Chesterbrook Elementary School. Participants were also notified that the written consent would also be reviewed on the day of the interview. A copy of this document can be found in Appendix C.

The written consent form included the purpose of the study and the procedures that were to be followed during the interview protocol. The consent form was required when the Virginia Tech Institutional IRB was submitted, and therefore was subsequently approved along with the IRB. Before beginning the interviews, all participants were required to sign the written consent forms, which ensured that informed consent was obtained. The consent form can be found in Appendix C.

All information pertaining to the individual school site and the school division was and will continue to be kept confidential. Chesterbrook Elementary School and Holloway Public Schools are pseudonyms for the individual site and school district utilized in this study. Each individual interviewed was also given a pseudonym, which was included on their interview protocol forms. In regard to the storing of data, when not in use, laptop computers housing data and information were locked up throughout the study, and will continue to be locked up. Paper documents and records associated with the research are kept in a separate locked compartment.
The key for the pseudonyms is kept separately from the interview data to ensure confidentiality. All collected data will remain locked and secured for three years after the study has been completed.

Trustworthiness

In order to demonstrate that this study is trustworthy, I used multiple methods in order to establish credibility, transferability, confirmability, and dependability. Establishing trustworthiness helped to show that the research study’s findings are credible.

Credibility. Credibility helps to demonstrate that your findings are true and accurate (Statistics Solutions, n.d.). Data were collected in a variety of ways including individual interviews, field notes, and document reviews. This helped to ensure credibility as the data collected were examined and compared with research findings. Mellard (2010) noted that comparing data with the research findings allows for a determination as to whether or not the data is representative of the RTI themes found in the literature.

Triangulation also helps to support credibility, by backing the researchers claim that the research findings are not a product of a single method, source, or bias by the investigator (Patton, 1990). Analyzing multiple sources of data in my research study allowed triangulation to occur which led to the merging of evidence (Yin, 2003). Coding the interviews utilizing the same method for document analysis contributed to triangulation of data as well. Triangulation helped to show credibility in my research study.

Transferability. When looking to demonstrate transferability, a researcher attempts to show that the findings from their study are applicable in similar situations, populations, or phenomena (Statistics Solutions, n.d.). Although significant descriptive data were provided in my research which demonstrates transferability (Lincoln & Guba, 1985), it will be up to each individual reader to determine whether or not my findings and recommendations are transferable.
Reader generalizability is the understanding that the individual reading the study will ultimately decide the extent to which the study applies to them (Merriam & Tisdell, 2016). At the same time, it was my responsibility to provide the reader with a detailed description of the context of my research study, which would better facilitate a connection and comparison with the reader’s situation (Merriam & Tisdell, 2016).

**Confirmability.** Confirmability in a research study refers to the degree of neutrality demonstrated. The findings of a research study should be based on participant response as opposed to researcher bias (Statistics Solutions, n.d.). Given that I do work in the same public-school system as the subject sites, I had the benefit of knowing the individual school sites and school district well. I have a solid understanding of how RTI was intended to be implemented across HPS, an awareness of resources available to schools, as well as access to many of the school district personnel that had involvement in the implementation of RTI. Because of my familiarity with the district, I was able to predict with some certainty specific documents that were available to me, as well as who or where I could go if additional clarification was needed. I unquestionably carry minimal assumptions given my experience and knowledge of RTI. Any assumptions or inferences I had during the study had the potential of being biased, and to address this I carefully followed the research design outlined in this chapter, as well as utilized the document review protocol when looking at all documents concerning RTI. This helped to ensure confirmability of my research study.

**Dependability.** Dependability looks at the ability for a research study to be replicated, while finding similar or consistent results (Statistics Solutions, n.d.). In regard to dependability, I utilized multiple data sources and compared my findings with the research in an effort to show that the results from my study were consistent and dependable. The Document Analysis Protocol that I used was proven successful when utilized by Collins (2014). This helps to add to the
dependability as well. Finally, I asked a cohort member at Virginia Tech to examine my data collection and data analysis process, as well as review my study results. Asking a cohort member to perform an inquiry audit to confirm the accuracy of my findings helped to demonstrate dependability.

Summary

This case study looked at how one individual school implemented RTI within their building, how data were utilized, and how they monitored progress throughout the RTI implementation. In order to determine these factors, I employed the case study approach. One specific school was studied, and qualitative data were analyzed and utilized. The study produced findings that provided insight into how RTI was implemented, how data were utilized, and how progress was monitored at one elementary school in Holloway Public Schools.
Chapter Four

Findings

This study analyzed the first year of implementation of Response to Intervention (RTI) at one elementary school. RTI consists of a tiered system of support capable of helping all students learn at high levels (Burns, Appleton, & Stehouwer, 2005). RTI is an increasingly popular approach to meeting the needs of students. However, an understanding of the early stages of the process of how schools implement RTI effectively is limited. Because no consensus exists on a singular implementation model or set of interventions to be utilized, skepticism and confusion arises when schools implement RTI (Gessler Werts, Lambert, & Carpenter, 2009).

This study addressed a gap in the literature by examining the first year of RTI implementation at Chesterbrook Elementary School (CES) in the Holloway Public Schools (HPS). I examined how CES implemented RTI, focusing on evidence regarding fidelity of implementation, how the school utilized data, and how CES monitored progress.

Research Questions

In this chapter, I present the findings of this case study organized around the research question and three sub-questions. Before honing in on the school, I explain in detail how the Holloway Public Schools implemented Response to Intervention district-wide. After that, I discuss the implementation at CES within the context of the following research question and three sub-questions:

1. How did the subject elementary school implement RTI?
   a. How did the school site utilize data?
   b. How was progress monitored at the subject elementary school?
   c. What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes?
I gathered the data to answer the research questions for this case study from a variety of sources, including interviews, school and county RTI documents, school report card data, and professional learning opportunities focused on Response to Intervention. The findings presented below rest on my analysis of those data.

The participants in this study primarily included administrators and teaching staff at Chesterbrook Elementary School, as well as one central office administrator within Holloway Public Schools. The participants had a range of school-based experience from seven years to 29.

Table 1 displays the demographics of the participants in the study.

Table 1

<table>
<thead>
<tr>
<th>Participant</th>
<th>Experience</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Office</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tina</td>
<td>20</td>
<td>RTI Coordinator</td>
</tr>
<tr>
<td><strong>Chesterbrook</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Susan</td>
<td>29</td>
<td>Principal</td>
</tr>
<tr>
<td>Kate</td>
<td>10</td>
<td>Assistant Principal</td>
</tr>
<tr>
<td>Veronica</td>
<td>17</td>
<td>Reading Specialist</td>
</tr>
<tr>
<td>Linda</td>
<td>14</td>
<td>Math Coach</td>
</tr>
<tr>
<td>Tonya</td>
<td>8</td>
<td>Teacher</td>
</tr>
<tr>
<td>Sarah</td>
<td>7</td>
<td>Teacher/Instructional Lead Teacher</td>
</tr>
</tbody>
</table>

Purposeful sampling was used to identify the participants. The district RTI Coordinator recommended the elementary school site. The administrative team at the site recommended the teaching staff as participants in the study. Chesterbrook was chosen because at the time I completed the study, the district RTI Coordinator believed that the site had implemented RTI
effectively and that they would be able to provide the data necessary for this study. The participants recommended by administration were chosen due to their knowledge as well as their role throughout the RTI implementation process at Chesterbrook. The administration at Chesterbrook recommended Veronica: Reading Teacher, Tonya: 3rd and 5th grade teacher, Linda: Math Coach, and Sarah: Teacher/Instructional Lead Teacher (ILT). These individuals were highly involved in the RTI planning process as well as the partial implementation of RTI during the 2015-2016 school year and the full implementation during the 2016-2017 school year.

**District RTI Implementation**

HPS began its RTI journey after a county-wide report on Services for Students with Special Needs was completed in 2013. One recommendation for the Special Education, English Language Arts, and the English as a Second Language offices involved the implementation of a Multi-Tiered System of Support. One of the HPS school board members strongly advocated for the implementation, so HPS followed up on the recommendation by creating the RTI Coordinator position for the district, whose primary responsibility would be to develop a county-wide system of support in order to provide an immediate response to academic and behavioral needs of students. This system of support included ways of progress monitoring to ensure that data-based instructional decisions are being made.

Tina, the RTI Coordinator was selected for the position and began this new role during the 2014-2015 school year. Tina served as a general education teacher, special education teacher, and instructional specialist in the Special Education Office prior to her role as the coordinator. In her many roles, Tina had already started thinking about how to give all students access to interventions they needed. She stated:

I was frustrated in Holloway at that time because we had just a very few interventions, but they were really only available to kids with [Individualized Education Plans] IEPs
and then fast forward when I got a job in the Special Education Office as the instruction specialist, I worked to try to get all of our...for several years to try to make all of our interventions available to all of our kids so in essence starting to implement aspects of RTI before we as a district even wanted to formally adopt RTI as a framework.

After beginning in the position, her initial work focused on building an understanding of RTI among HPS personnel and providing training on the RTI framework to administrators and staff. During the summer of 2015, Holloway Public Schools brought Dr. Austin Buffum, author of several RTI books including *Taking Action: A Handbook for RTI at Work*, to the county administrative conference to speak with executive leadership, school administrators, and many special education staff members. Dr. Buffum discussed the RTI at Work model, which was centered on Professional Learning Communities at Work (PLC) model. Dr. Buffum spoke about the urgency with which educators needed to act when helping to ensure that all students learned the essential skills, knowledge, and dispositions in order for them to succeed. He emphasized the importance of ensuring high levels of learning for all students and reinforced that implementing RTI across the district would help educators to ensure that each and every child received the support that they need in order to be successful.

Along with addressing the school administrators during the summer, Dr. Buffum also worked with school teams from every school across HPS throughout the 2015-2016 school year. In regard to Dr. Buffum working with HPS school teams Tina noted, “…my hope was we would have this team at each school that could begin thinking of where they were at, where they needed to go, and kind of map that out.” These sessions will be discussed in more depth below with respect to CES. Tina specifically noted that it was important for Dr. Buffum to come to address the what and why of RTI. Then, as the district RTI coordinator, she could begin to address the how, which she did in several ways.
Successful RTI Implementation

**Work with central office staff.** Much of the work Tina completed with central office staff during the 2015-2016 year revolved around considerations for the master schedule, based on curriculum areas. Tina stated, “We worked centrally here with all of the curriculum supervisors and different people to think about some sample master schedules that could show how some intervention time could be built into the master schedule.” Throughout this work Tina made sure to still honor the nuances of HPS, such as policies around P.E. and recess, teacher planning time, and various K-12 language programs. Tina worked with principals in order to determine what materials teachers might need for interventions, as well as what types of training they might need building-wide to ensure that teachers have the knowledge and skills necessary to implement the scientifically-validated research interventions.

**Site based support.** Tina worked on building the knowledge of RTI and simultaneously building capacity in building administrators and teaching staff. Tina noted, “For the first two years, it was just me trying to build relationships, trying to help support with gentle nudges....” One way that she accomplished this was through the Five-Year Framework for the HPS System of Support, which can be found in Appendix D. This framework had thirteen long-term goals related to both PLCs and RTI and included strategies to help accomplish the goals. Although Tina communicated that all goals were important, she gave school leaders flexibility in the timeframe for implementation. For Goal #1: All schools will have at least two 60-minute timeframes a week for teachers and staff to meet in collaborative teams as a part of the PLC process, schools had until Spring of 2018 to fully implement CLTs in their school buildings. Both Goal #7: All grade level/content teams will analyze and respond to academic and behavioral data and Goal #8: All schools will have time during the school day to deliver intervention/extension for all students remained in the implementation process from the fall of 2015 to the spring of 2020.
In order to support the goals within the framework, Tina spent a lot of time meeting with administrative teams in a variety of capacities, including supporting principals at their monthly meetings. Individual schools varied in terms of the amount of help they needed from Tina. For example, Maple Hill Middle School called on Tina to help support a committee as they planned their implementation for the following school year. She attended several committee meetings and helped support the what, why, and how, which ultimately helped the committee gain consensus in regard to how RTI would be implemented at that site.

Comparatively, Chesterbrook did not need the high level of support that Maple Hill required. Tina attributed this to the administration and leadership team being actively involved in the planning and implementation process. She stated:

Well so I think at the time the principal and AP, it spoke to them. It meshed very well with their philosophy of instruction and they really led that work at their school. They, you know, they did partner with me for some of it, but a lot of it, it just really resonated. They there [Chesterbrook] they didn't need to be sold on that it’s what's best for our kids. They had already been really working on co-teaching models and really big on including kids as much as possible with appropriate supports so fitting in the focus on the data at Tier 1 was very natural for them.

Tina provided resources and support on an as needed basis, including observing and consulting when additional student support was needed. However, with a supportive administrative team that believed in RTI, the support to Chesterbrook was much more limited. Chesterbrook’s ability to embrace RTI and its potential allowed the school to move toward implementation in a more independent capacity when compared with schools such as Maple Hill.
Tina also spoke about the district level expectations for Professional Learning Communities and Response to Intervention. Tina described what she would like to see in regard to PLCs and RTI at the K-8 level stating:

I would like to see at least K-8 solid CLTs that meet regularly to not only talk about core instruction in terms of what kids need to know and be able to do, but what will our response be when they don't have it. I have moved away from a rigid expectation that they have to have a stand-alone intervention block but what is non-negotiable is that they have to have a flexible enough schedule that they can provide intervention when it's needed so whether that's a double dose during workshop time where either a teacher pushes in and does a group in the back of the room or a hallway or another room, that when kids need that intervention they get it at the first sign of need and it's not a wait and see well let's just see it eventually…and that we are using some form of data to make sure that they are closing the gap to whatever is needed. So that's what I would expect to see really K-8.

Creating resources. Tina and the RTI office spent a significant amount of time creating RTI resources for the district. Tina wanted all staff members to have an understanding of RTI and have access to resources that help support implementation. She commented, “At one point, we even surveyed staff and from the comments we created an FAQ.” Because CLTs had already been implemented in HPS a few years prior, Tina focused on “marrying” the work of CLTs and RTI together. In order to do this, she enlisted the help of educators across the district that focused on creating Power Standards documents, which specified the standards that students needed to master before moving on to the next grade level. Her reasoning behind this focus was simple.
...when you are teaching and you have groups of kids that didn’t master all of the content you have to have a system to prioritize what you reteach, so we worked with trying to communicate what power standards are and focus on these first.

With the support of teacher teams, power standards for all subjects K-12 were created for district-wide use. Collaborative Learning Teams can refer to these documents as they plan, to help ensure that students master the power standards first, prior to moving on to additional standards.

Some of the other resources created included Intervention Guidance Documents for English Language Arts for both elementary and secondary levels. These resources provided in depth information on Tier I, II, and III interventions as well as fact sheets for each individual intervention utilized within the district. Other documents included intervention protocols which could be used after analyzing data and determining areas of need for students to allow school teams to choose specific interventions that matched the need. Kate, the Chesterbrook Assistant Principal, noted:

Holloway actually has a nice, a nice resource that shows what interventions match to which weaknesses or areas of growth. So, I think that's where you look at, you know, is it Read Naturally or is it going to be My Virtual Reading Coach, and it's just going to go back to what the need is and then looking at what intervention is, is most appropriate.

At the beginning of the RTI implementation, Tina worked closely with the content area supervisors and the Director of Special Education. Since then, she hired two specialists that work in her office to help support interventions and CLTs across the district. The additional positions have been instrumental in the continued work of RTI implementation district-wide. The district level work influenced the implementation of RTI at each school, including Chesterbrook.

**Chesterbrook Demographics**
Before moving into the findings of the case study, I will provide a deeper context of Chesterbrook Elementary School. Chesterbrook Elementary School is a neighborhood school, primarily serving Pre-K through fifth grade students who live within the areas immediately surrounding the school. A small percentage of students attend the school via county-wide programs in which HPS places students in schools based on their needs. These programs at Chesterbrook include Preschool Special Education and Functional Life Skills.

Chesterbrook serves nearly 700 students in a fairly diverse environment. The racial/ethnic demographics of Chesterbrook include nearly 50% White students, 20% Hispanics, 10% each of Asian, Black, and Multiracial, and smaller American Indian and Native Hawaiian groups. The student population consists of approximately 15% students with disabilities, 20% economically disadvantaged students, and nearly 25% English Learners (http://schoolquality.virginia.gov/virginia-schools).

How Did Chesterbrook Implement RTI?

Dr. Buffum’s districtwide workshops paved the way for the Chesterbrook Elementary School Administrative team to embrace RTI and helped set the stage for full implementation during the 2016-2017 school year. When asked why Chesterbrook staff implemented RTI when they did, Principal Susan said, “I am very impressed with the work of both of the DuFour’s and their approach to and outcomes of Professional Learning Communities. Their work really just resonated with me. It also made me realize that we needed a more systematic approach to intervention that wasn't a teacher by teacher approach.” Due to feeling very passionately that students would benefit from RTI services, Principal Susan and Assistant Principal Kate began planning a partial implementation for Spring 2016 and a full implementation for the fall of 2016. The partial implementation will be discussed throughout.
In the discussion of how Chesterbrook implemented Response to Intervention, I analyzed their multi-level prevention system and their three tiers of support, their use of universal screeners, and progress monitoring. Data-based decision making will be discussed in each section as data purvey throughout the tiers of support, universal screening, and progress monitoring. This structure keeps the information concrete and helps to convey how Chesterbrook implemented RTI. Lastly, fidelity of implementation will also be discussed.

**Multi-Level Prevention System**

Multi-level prevention systems consist of three levels of intensity. The primary level, Tier I, entails high quality classroom instruction. Tier II includes research-based interventions, typically moderate in intensity. Tier III provides the most support through increased intensity of interventions. Students who have shown minimal response to high quality classroom instruction and Tier II interventions enter Tier III. If Tier III is not effective in meeting the needs of the student, the school team would then look to begin the process of beginning a Student Study, with a potential to refer the student for testing under special education. It is important to note that although a student may access all three tiers prior to being referred to a Student Study, the team including the parents can make this referral at any time if they feel that more information is needed to determine if the student is in need of specialized instruction through special education.

**Background.** Throughout the 2015-2016 school year, Dr. Buffum worked directly with the Chesterbrook team to help develop leadership in the implementation of RTI. The RTI at Work training that he led focused on developing leadership teams to support the implementation of sustained RTI best practices in schools. Throughout each of the trainings, Chesterbrook staff members worked to develop their understanding of RTI and refine their process for implementation, with a mission of ensuring that the whole school assumes responsibility for the
learning of every child. When asked about RTI implementation at the district level and school level, Tina responded:

Yeah so first for me I needed to provide training at, for all schools on even what is the framework. So that's when I had Austin Buffum come in and we had schools of roughly of teams of 8-10 come in for I want to say at least … 3 different days spread out maybe it was 4 days spread out and my hope was we would have this team at each school that could begin thinking of where they were at, where they needed to go and kind of map that out.

The Chesterbrook Elementary School leadership team attended the workshop in order to learn more about RTI and the systematic process for helping to ensure that all students have access to the time and support needed in order to learn at high levels. Teams were asked to discuss their individual school’s current reality in regard to how RTI was viewed, with objectives of 1) understanding how to simplify the Chesterbrook’s approach to RTI, 2) acquire strategies and tools to be able to do the work of RTI, and 3) create a draft pyramid and an action plan for Chesterbrook. The team’s work on the pyramid formed the basis for multi-level instruction at Chesterbrook. Figure 2 below shows a blank copy of the pyramid that all school sites completed during the two-day workshop.
Three critical teams. Three types of teams are a part of the RTI at Work Pyramid that Chesterbrook used to design its multi-level prevention system. The School Leadership Team and School Intervention Team made up the two school-wide teams. Paired with grade level CLTs, they took responsibility for the learning of each and every student in the school. The composition and roles of these teams will be discussed below.

A School Leadership Team must gain consensus regarding RTI. The school leadership team plays a large role in helping to build a culture of collective responsibility and accept accountability of ensuring high levels of learning for all. The Chesterbrook Leadership Team included the administrators, grade level team leaders, and content area specialist leaders. The
leadership team spent a lot of time at staff meetings and during CLT’s building understanding of Response to Intervention. Sarah, the 5th grade teacher and Instructional Lead Teacher (ILT) stated:

So I did go and upon Susan's request attend a few of the other grades, CLTs just to help them, you know, like asking specific questions to guide their thinking. Providing examples of things that we were doing in fifth grade. I mean we were, we were learning ourselves. But just providing that additional examples, answering questions, finding resources to help support it.

Along with working closely with CLTs, information from the RTI at Work Conference was shared. Then the staff engaged in dialogue around why this work was best for all kids. Linda, the math coach, specifically stated,

We wanted to meet the needs of all our students and wanted to help bring focus to all the tiers of instruction….So I think helping staff develop an understanding of what those tiers meant and what instruction looked like at each of the different tiers.

The School Intervention Team consisted of individuals within the school building who helped support interventions for all grade levels. This team included the counselor, psychologist, special education teachers, subject specialists, and instructional aides. They helped to support the work in ensuring that all students learn at high levels. The staff at Chesterbrook was very involved in the intervention process, with an intense focus on the two “neediest” grades, discussed in more depth below.

Teacher teams were also imperative to RTI at Chesterbrook. Each teacher team consisted of the general education teachers in each grade level, as well as the special education teacher supporting the grade level. These teams met weekly to discuss student academic progress and
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make adjustments in their classrooms as well as RTI groups. Teacher teams will be discussed more in Tier I.

**Tier I.** The Teacher Teams formed a crucial part of Tier I instruction. Together with the math coach and reading specialist, they worked collaboratively as part of CLTs in order to ensure that all students mastered the power standards, or essential learning for the grade level. Teams established curricular priorities that every single student needed to master. Chesterbrook grade level teams worked closely during CLTs to answer the Four Key questions. Appendix G shows an example of the third-grade team’s notes from a CLT meeting that focused around these four questions: 1) What is it we want students to learn? 2) How will we know if they have learned 3) What will we do if they don’t learn? and 4) What will we do if they already know it?

The team answered Question 1 by writing out the math multiplication standard they were working to address, as well as including examples of rigor in order to demonstrate what proficient student work looks like. To answer Question 2 the team referenced team-developed common formative and summative assessments that enabled them to gauge student understanding. In order to answer Question 3, the team created an additional document which showed the summary of data/targeted interventions. In their team created instructional map, the teachers included the number of days to spend on each learning target, one day to give a common formative assessment and one day to analyze data and plan interventions based on those students who did not meet mastery of the targeted skills.

Students scoring below 100% were considered not meeting mastery. After analyzing the data, the team placed students in interventions by utilizing a spreadsheet that listed each individual target, room placements, and the teacher who would teach the designated skill. Interventions were provided by the third-grade math team and the math coach. Question 4 was answered on the Summary of Data/Targeted Interventions document as well students who
reached mastery participated in enrichment activities related to multiplication such as math dice and Math Fundamentals games.

Reading and math CLTs met weekly to discuss these four questions in order to ensure a viable curriculum for their students. This helped to guarantee that all students at Chesterbrook within each grade would receive the same curriculum throughout the year. Tonya commented, I taught in third grade and we kind of implemented very much to fidelity for half the year the four-step cycle of identifying the learning targets, creating common assessments and then meeting every week to see how kids were doing and then group them [for Cougar Block].

Utilizing the Four Key Questions from the Professional Learning Communities Framework helped Chesterbrook as a school ensure that all students were provided with high-quality Tier I instruction. Establishing a solid Tier I program was important in laying the framework for Tier II and Tier III.

**Tier II and III.** Tier II and Tier III are being discussed together due to the fact that both tiers address students in need of support due to performing below expected benchmarks for their grade level. Different interventions were utilized in the tiers. However, in many cases, Holloway used the same intervention for both Tier II and Tier III, with the main difference being the amount of time the student spent in the intervention or the student-teacher ratio.

Holloway differed from many districts in its approach to the multi-level system of system. Tina stated, “I think of it more as our guidance around how to intensify the level of support rather than moving from tier to tier and that's different than I think in some districts or some of what you'll read in the research.” It was very important for her to note this difference because the ultimate goal consists of providing the student with the support they need at the
intensity they need it to ensure they have access to appropriate supports. In regard to why the district didn’t move students through a tier to tier approach, Tina responded,

We have felt like that wasn't a good practice because what you will read current coming out of research is when you have generic Tier II and Tier III interventions based on certain cut scores it doesn't always target exactly what the student needs and then we don't see the growth we would hope. So, what we have done is provided what is available and I more think of it is as to what level of intensity do our students need interventions. This better allowed Chesterbrook, and subsequently HPS more flexibility when designing their approach to RTI and ensuring that all students’ needs were met. If a student was in need of a Tier III intervention, then they would be able to access a Tier III intervention regardless of previous intervention attempts. Clarifying even further, she commented,

Reading Recovery is by definition a Tier III [intervention] because it’s one on one and it’s very intense. It’s for thirty minutes one on one, but I wouldn’t not move a first grader if that’s what they need because they didn't go to the Tier II first. So, I felt like that was just counterproductive. We need to give them what they need at the level of intensity they need so that they can help provide that early support.

The leadership team at Chesterbrook began developing the plan for Tier II and Tier III RTI implementation at the RTI at Work conference. This plan included a small-scale trial implementation that began in January 2016. The leadership team determined that the trial implementation plan would involve 3rd grade students and staff only. In the trial implementation, Principal Susan chose math fact fluency, an area of focus that involved an essential skill that she was confident would be relatively easy to implement. All third-grade general education and special education teachers, the coaches, and the third-grade students participated in the trial. After discussing the data around fact fluency, the teachers developed groups for all students in
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the grade. These groups were created based on student need, whether below grade level, on grade level, or those in need of an enrichment.

The groups crossed third grade classes, so the plan required students to change classes to meet with their groups. The teachers used fact fluency activities to work with the students in their groups. To facilitate the transition, each teacher chose a color to designate his/her group. The students assigned to the teacher were designated by the same color. Each teacher placed their respective color outside of their classroom. At the beginning of the RTI block, the classroom teachers put each student’s name with a color next to it on their SMART Board. All students within the grade relocated to the room with their color for fact fluency. Principal Susan continuously highlighted the importance of developing a system and practicing so that the logistics did not impede success. She stated,

I know spending time practicing how to go to different places with different groups seems like overkill, but it’s really not because you end up losing a lot of time if kids don't know how to quickly get to their assigned intervention spot. And if you want the groups to be fluid and responsive to changing needs then students need to know how to quickly find where they need to be and get there. They need to look at the SMART Board, see what color group they're in and go there. Outside each classroom or learning space we had a piece of colored paper that stayed the same all year. You could change the students in the group or the teacher facilitating the group, but the "purple" classroom always remained the "purple" classroom for intervention block.

She also emphasized the importance of assigning the most skilled educators to the students with the most needs. After analyzing the data, the team placed students who needed additional support in small intervention groups of three or four students with the strongest math supports available, including the math coach. The students received small group instruction that
supported their fact fluency skills and understanding. Students who were on or above grade level in their fact fluency understanding were placed in a block with 25 students. They spent their time engaged in a variety of math games that extended their learning. The principal felt strongly that students demonstrating mastery would not get “rewarded” by receiving an opportunity for extra P.E. time. She commented:

And what I didn't want to happen is for students to be disadvantaged or to miss out because they needed more help. I know that in some schools, kids who already demonstrated mastery on a concept or subject area would get to go to a favorite activity during intervention time. For example, students might get to go to extra P.E. or they would get to go to art, and that just does not set with me personally. I’m all about everybody getting what they need, but it shouldn’t feel like a reward or punishment. For a lot of kids, P.E. is a reward. And so then I think being in the group reteaching math, and kids might view it like punishment just because they’re someone who takes longer to learn something.

Therefore, she ensured that all students received access to math support or enrichment during the block. Whether students were below grade level, or on or above grade level, Susan worked to provide the appropriate support to either remediate or extend their fact fluency knowledge and skills.

The 3rd grade team continued the trial implementation throughout the spring, while continuously looking at data from fact fluency assessments in CLT to regroup students as necessary. The third-grade team along with the coaches became the school “model” and discussed how they were implementing RTI with fact fluency at staff meetings throughout the spring. Four of seven interviewees stated the importance of this trial and felt strongly that developing an effective system and practicing rotating during this intervention block was
extremely important. The principal continuously stated the importance of developing a RTI system and practicing on a small scale so that the logistics did not impede success. Evidence of this was demonstrated as Susan stated:

I'm also a huge believer in systems, so we didn't start varied interventions the first quarter, but what we did practice was setting up the system for being a part of a group that changed. I do think that sometimes the logistics can undermine the learning. I think if you don't set up systems for things, then it falls apart before you even get to focusing on the instruction for students.

After the spring implementation, the administrators and staff on the leadership team prepared to implement RTI in full the following school year. For the full implementation, the team used many of the aspects of the partial implementation, specifically implementing a system for rotation utilizing colors, homogenous grouping of students within each grade level, and having both interventions as well as enrichment activities with an academic focus. Each classroom was assigned a color that matched the teacher’s name on the shared data Google doc. In order to help prepare the entire staff for the implementation, the third-grade team became the model for the school and shared their experiences with the whole staff. This helped the school staff understand how the rotation system worked, with an emphasis on increasing efficiency in the Cougar Block.

As Chesterbrook Elementary moved into the 2016-2017 school year, RTI was implemented across all grade levels. Chesterbrook based their English Language Arts (ELA), Math, and Cougar Blocks off of the Holloway Public Schools timeframe guidelines. For ELA, the recommended guideline for grades K-2 were 120 minutes for Literacy, Word Study, and Writing, whereas the recommended amount for grades 3-5 was 90 minutes for the three
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components. For math, the recommended guideline for grades K-5 was 75 minutes with 60 being dedicated to math and 15 for calendar math.

The Kindergarten and 1st grade teams added the intervention block, Cougar Time, by increasing the amount of time spent in their Literacy and Math Blocks, whereas grades 2-5 added Cougar Time into the schedule as a separate 30-minute period. Chesterbrook’s Cougar Block followed the HPS five-year framework that required schools to have a master schedule that built in guaranteed time for students in need of intervention and enrichment. The framework recommended 30 minutes 4-5 times per week for the block. All students in need of an intervention participated during this 30-minute time period.

Class homerooms remained heterogeneously grouped, while the intervention block was homogeneously grouped based on academic or social-emotional needs. The homogenous groups varied in size and could be as small as one for certain interventions in Tier III. All Tier II and Tier III interventions occurred during the created Cougar Block, with the exception of some math interventions offered after school. Susan prioritized reading, which is why the school offered some math interventions after school to ensure that all students had access to the supports they needed.

Students who required more intensive supports accessed these supports during the Cougar Lab before or after school. Permission was required by parents in order for students to attend any Cougar Lab session. Parents provided transportation for the before school session, while HPS had an afternoon bus run if students attended after school Cougar Lab. Chesterbrook provided teachers with a stipend for supporting students during these open labs.

Reading Intervention Formation in Tier II and III. Due to the fact that Susan made reading a huge priority, the entire RTI schedule was based on which grade levels needed the most intensive reading support, which means that the schedule had the potential to shift each
year based on needs. After evaluating data from the previous year and beginning of year data, Susan met with Kate and the reading specialists in order to determine needs. They analyzed data to determine the two grades in need of the most support, then created the Cougar Block schedule. The neediest grades began their day with ELA, with access to the reading specialists for additional support, while the grades in need of less support had ELA at other times in the day. In the first years of implementing RTI at Chesterbrook, Susan noted the neediest grades were third and fourth grade. Cougar Block times were in 30-minute increments, beginning at 9:20 and ending at 3:35pm. Each grade level had its own Cougar Block within the day which allowed for maximum support from staff members during each time period.

If a student needed support in more than one area, Chesterbrook created a specific process to ensure that each student received the appropriate type and level of support. Susan noted, however, that this was not a simple process, because many students have a similar profile in terms of their needs. “…seven eighths of the kids are all the same kids. They need math, they need social emotional, they need reading, right? I mean, that's just the reality.” Susan commented that in order to address this she created a flow chart for the staff to use when making these decisions. Social emotional was at the top because it was important to them that the students were okay and that they had a person in the school that they connect with as an advocate. Once social emotional was addressed, reading would take priority if reading and math were both areas of concern. Susan stated this could be difficult due to competing interests from the staff members. Prioritizing reading will be discussed in more depth below.

In reading, intervention groups were often formed with students who had similar areas of need that inhibited their ability to progress in their reading ability. For example, a student who had weak fluency skills, but had strong comprehension skills, might be supported in a fluency-based intervention such as Read Naturally or Leveled Literacy Instruction (LLI). If a student’s
decoding skills did not improve, he or she found it difficult to move forward to the next reading level, as other areas of reading might be impacted by the same issue.

Students in need of reading support were provided access to evidence-based interventions such as Leveled Literacy Instruction (LLI), Orton Gillingham, SpellRead, Reading Recovery (RR), My Virtual Reading Coach, Phono-Graphix, Read Naturally, and PCI. The interventions available depended on grade level as well. For example, students in need of reading support in Kindergarten to grade 2 could access the Earobics intervention on top of their classroom-based reading support in a small group setting. Similarly, HPS provided Reading Recovery only in first grade. Third through fifth graders had the most available interventions, having access to all those listed above except Earobics and Reading Recovery.

For fidelity purposes, most reading interventions were offered for thirty minutes five days per week. The size of the group differed depending on intervention, since certain interventions such as Reading Recovery and the PCI Reading Program required one to one support. One exception to the 30-minute rule occurred for students participating in Spell Read, who attended a before school session due to the forty-minute intervention time requirement that supported fidelity of implementation. Chesterbrook held two SpellRead groups each morning from 8:15am-9:00am, with 4-5 students per group. Chesterbrook hosted a Cougar Lab before and after school, which allowed the school to provide additional intervention supports to students who needed more support than the thirty-minute Cougar Block during the day provided.

Since each grade level had its own Cougar Block, students were placed in interventions or enrichments by grade level. During the block, all teachers within the grade level, including the grade level special educator(s) had a group of students. Each grade level also had reading specialist support during Cougar Block. Students receiving enrichments went to classrooms with
general education teachers within the grade level and participated in enrichment activities such as Book Clubs, Chess, and Coding.

One concern about homogenous grouping arose because lower achieving students did not have access to these enrichment activities, which could widen the achievement gap as opposed to minimizing it. When asked about this, Kate responded that all students had access to several enrichment activities throughout the year. She stated that all students had the opportunity to experience coding and chess at some point throughout the year. She commented, “Kids participating in intense interventions received [enrichment activities] after SOLs, and they got to experience all special enrichments.” She also commented that specific interventions such as book clubs could be used for both enrichment and intervention, as the focus of the book club differed for the two groups.

During the first year of RTI, CLTs reviewed data such as running records and teacher anecdotal notes weekly. However, groupings were not often changed until the end of the quarter when an abundance of data such as DRAs and DSAs were available. At the end of the quarter the team looked at the data to determine which students were making growth and which might require additional support. Additional support could be provided in a number of ways including moving students to a group with a smaller teacher to student ratio, considering an alternate intervention, or providing students with additional support during the before or after school Cougar Lab.

**Math Intervention Formation in Tier II and III.** The math coach at Chesterbrook, Linda, felt that math intervention groups ran distinctly when compared to reading. Reading skills were more connected, but not all math skills area were related, i.e., fractions and general number sense. A student who is above grade level in number sense may have difficulty with the fractions unit and need the support of an intervention. Since all math skills do not build off of one another,
the groups tended to be much more fluid. Students were moved in and out of interventions as soon as mastery was demonstrated in the skill or strand with which they had exhibited difficulty.

Teachers within each grade level CLT reviewed math data at their weekly meeting, along with the math coach. The data helped inform their decisions on what skills or concepts needed to be re-taught, as well as what students needed access to the re-teaching session. After re-teaching, teachers provided students with an exit ticket to gauge student understanding. The CLT analyzed data from the exit tickets to place students in need of additional support into intervention groups for the weak skill. Linda was very involved in the CLT meetings, and commented,

They would be doing that focus…a focused group based on looking at the data and what they [students] needed and they would be a blend of students. So it would, you know, it’d be across the grade level. So there could be students from four different classrooms in the same group.

Math was monitored very closely each week. Students were shifted in and out of intervention groups every two to three weeks. CLTs reviewed data such as exit tickets, assessments, and photo documentation. When analyzing the data, teams chose to focus more specifically on weak strands within the current unit of the curriculum framework.

One major difference between how math and reading intervention groups related to access to interventions. Holloway Public Schools provided access to few math interventions, so the interventions ran more similarly to a problem-solving model. They did not utilize specific cut scores when looking at data for groupings. Instead, whole group dialogue about student areas of growth helped ensure that each child received the support they needed.

Linda stated,

We would look specifically at all their data points, not just in the raw score. And I think we’d really look at the whole child, like what are all, what are all the reasons that this
child might have gotten a 60% right. And then really trying to identify what parts do they need intervention on.

When asked specifically about which math interventions the teams primarily utilized, Linda replied, “Teacher created. It’s not a lot out there for math. And that’s I think something the county is looking at, but there’s not as many programs as I know with language arts… There’s a lot less.”

Since the interventions were teacher created, the teams possessed more flexibility in regard to student movement. If students demonstrated mastery of a skill after three days in the intervention, they would be moved back into an on grade level enrichment group, as opposed to continuing on in the intervention.

As Linda mentioned, there were very few commercially available math interventions being utilized throughout HPS. For math interventions, Chesterbrook primarily used Reflex and Do the Math, which were offered during Cougar Lab, whereas all math interventions during Cougar Block were teacher created. Access to math interventions will be discussed in more depth in Chapter 5.

The concern of homogenous grouping was a lot less significant in math due to the nature of the intervention cycle. Since students were moving in and out of interventions so frequently, they had a lot more access to enrichment activities being provided during Cougar Time. In addition, Cougar Lab provided extended opportunities for math support which did not infringe on the school day.

**Research Question 1a**

This research question looked at how Chesterbrook utilized its data. Chesterbrook’s process consisted of four steps which included 1) analyze reading data 2) analyze math data 3) use those analyses to determine the greatest needs at Chesterbrook, with an emphasis on reading,
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and 4) use the individual student data and the school needs to assign students to interventions. The following section will walk through these four steps.

*Analyze reading data.* Susan, principal of Chesterbrook Elementary School stated that reading is the absolute priority, and for any student not reading within six months of grade level was considered an emergency situation. Students who were significantly below grade level in reading were placed in a reading intervention that matched their area of need. To help place students in need of a reading intervention, Chesterbrook primarily relied on the PALS and DRA assessments. These assessments provided information on the students’ accuracy, fluency, comprehension, and spelling and both assessments provided imperative information regarding a students’ reading ability. The teams would evaluate the assessment results and determine the area(s) of weakness for each student, before referring to the HPS resource that provided interventions that specifically matched weaknesses or areas of growth for students. This resource helped to determine which intervention was most appropriate for a student’s needs. In situations where students had multiple needs, the team typically moved forward with the area of greatest need while continuing to reinforce the additional needs through classroom-based instruction.

Although Susan discussed the importance of reading and how a reading intervention would always take precedence over a math intervention, she, along with the team utilized components of the problem-solving model when determining intervention groups. This primarily came into play with the “bubble” students, or those students who were within six months of being on grade level. Students who were reading within six months of grade level were not immediately placed into an intervention. Needs were prioritized across the entire school before determining groupings for all students. Susan created a flow chart that showed where the priorities were when it came to reading instruction. She utilized this flow chart to develop an
understanding of where the neediest two grades were, and ultimately built the schedule around the two grades that needed the most reading support.

Once the schedule was determined, the teams were able to have further dialogue about student needs. Needs were prioritized by grades and then by students within the grade. The teams considered which students were at greatest risk, then what interventions might be offered to support those students. If a student was within six months of being on grade level, the team had a dialogue about next steps. Several options were considered: 1) move the student immediately into an intervention, 2) continue Tier I instruction and small group reading instruction within the classroom, or 3) continue Tier I instruction and small group reading instruction within the classroom, as well as hold an Intervention Assistance Team (IAT) meeting. The IAT meeting was held to share any concerns with the parents, have a dialogue surrounding the plan that would be put into place, and discuss any next steps. IAT meetings could be held at any point, whether a student was remaining in Tier I instruction or moving into an intervention. An IAT allowed for the team to document supports put into place for the student, as well as allowing the team to engage in a dialogue around what additional supports the student may need.

_Analyze math data._ As mentioned above, Principal Susan felt very strongly about reading as the priority subject. If a student was below grade level in reading and math, reading would always take precedence in regard to interventions. Similar to reading, grade level teams met to analyze several sources of data which might include teacher anecdotal notes, unit and quarterly assessments, and exit tickets. At the beginning of the year, teams reviewed and analyzed scores from the prior year to also support determinations about interventions.

Although the Math Inventory (MI) was a universal screener for math, Linda, the math coach, hesitated to say that it was utilized as a data point for forming intervention groups, stating that they instead analyzed primarily the data from the prior year and the beginning of the year
assessment in making their determinations, as the MI was only taken in fifth grade. Data from the prior year included SOL score results as well as the end of year assessment, which was a county-wide assessment focusing on the grade level standards. The beginning of year assessment was a form of pre-assessment in that it measured students’ knowledge of the grade level standards at the beginning of the year.

Linda also mentioned that Math Reflex was often used as a resource for the first three weeks of school until the teams had enough data gathered to support making intervention decisions. Linda discussed the decision-making process surrounding math, as it was a bit different from reading as discussed above. In order to make decisions around math groupings, data from the end of the previous year as well as the beginning of the year was analyzed in order to determine who was not at benchmark. The teams dug deep into the data, analyzing for things such as a weakness in specific strands across the board or common patterns in the data that would allow them to better approach interventions. Needs were prioritized based on importance, and number sense was a focus because this was more of a foundational skill, and then built as students progressed. Students who had weaknesses across the board in math could continue to participate in Math Reflex or another math intervention before or after school.

Due to the focus on reading, the math teachers relied on a response day one time per week to provide intervention on specific learning targets for the students within the grade level. This allowed for students in need of reading support to still have access to their reading intervention as well as a brief intervention on a specific learning target. To help place students in these short-term math interventions, Chesterbrook relied primarily on teacher created Learning Target Assessments. After students were provided with the assessment, the team met to plan the intervention for the Response Day. Appendix K shows the teacher created assessment for Multiplication Learning Targets 1-3, as well as the class data used in creating the intervention.
As noted, 100% indicated mastery, so anyone below this score would participate in the Response Day Intervention. In situations where students had multiple needs on the learning target assessment, the teacher used his or her judgement to decide where to place the student during intervention time.

*Use the analyses to determine needs at Chesterbrook.* Chesterbrook Elementary followed the HPS recommendation in regard to determining a focus for Tier II and III interventions. The HPS method differed from the one in the Standard Protocol Model. While the team considered the cut scores on screeners, not all students below the cut score moved directly into an intervention. Any student who scored more than six months below grade level in reading would automatically move into an intervention. However, if a student scored below grade level by less than six months, CES staff engaged in a lot of conversations and considerations before determining whether the student would receive an intervention. In some cases, school staff decided to continue to monitor such students and observe their progression in Tier I. This will be discussed in more depth in Chapter Five.

As in the standard RTI protocol model, all students at Chesterbrook participated in several universal screener assessments throughout the school year. Holloway Public Schools required universal screening as a first step in identifying students who may be at risk as well as students who may need additional instruction or instructional approaches. Phonological Awareness Literacy Screening (PALS) was a required screening that all students Kindergarten through fifth grade took two to three times per year. Additional diagnostic assessments included the Developmental Reading Assessment (DRA) or Teachers College Reading Assessment and the Math Inventory (MI). These assessments were administered at the beginning and end of year for all students, while students who were below grade level participated in them midyear as well. These universal screeners provide teachers with a better understanding of the strengths and needs
of the students within their classroom and grade level as well as provide a greater context for making grouping decisions.

The administrative team looked at the end of year data from these universal screening assessments, as well as beginning of year data in order to make data-based decisions regarding the intervention block. The results allowed the school team to better understand the knowledge and skill level of each student and make informed decisions around instruction and interventions. In addition to the universal screener, school personnel considered other data, including classroom-based assessments, observation, anecdotal notes, and exit tickets. A team of teachers, coaches, and administrators analyzed scores from the universal screeners in order to make initial decisions regarding core instruction and intervention.

Also used in collaboration with the beginning of year assessments were the students’ data from the previous school year, including any interventions the students participated in. It was expressed that it was important for the teams to really dig into the data in order to determine what was holding students back. Was it fluency? Comprehension? It was at this point that the intervention protocols were utilized in order to look at the area of need and choose interventions that would best address this need.

The topic of data meetings came up throughout the interview process. Chesterbrook teachers participated in weekly CLTs, but also participated in larger quarterly meetings, mid-year meetings, and end of year meetings which were larger group discussions that allowed grade levels, support staff, and administrators to dig deeper into the data. A mid-year meeting was also held in order to look at the big picture across the school. This meeting involved the grade level CLT including special education teachers, all reading specialists, and the math coach. Also present at the meeting were the Resource Teacher for the Gifted and both administrators. During the mid-year meeting, the team looked at all available data and determined what else needed to
be done in order to meet the needs of each child. This could include a variety of options from shifting student groups, varying the frequency, intensity, or duration of an intervention, or holding an Intervention Assistance Team Meeting (IAT). The IAT is a collaborative process that provides a forum for the school team and parents to engage in a dialogue around any academic and/or behavior difficulties. It is designed with the intention of promoting success for a student within the general education classroom, without resorting to evaluations or special education services. Modifications to the regular education program help to address a student’s needs.

At times however, the IAT team makes a recommendation to move forward with a Student Study, to determine whether or not a students’ needs require testing for special education services. The data collected from the classroom and RTI Intervention block were shared in any IAT or Student Study Meetings that took place, helping the team to make informed decisions about next steps. Sarah shared that as a group, the staff at the data meetings had a dialogue around what adjustments needed to be made to core instruction and how effective the implementation of interventions was. Sarah also commented:

Do we have the right people in place, do we need additional people? That was more for staffing shifts, sometimes in relation to intervention, sometimes in relation to core instruction, because we really recognize that that's where the bulk of our work needed to be done. And luckily Susan valued that.

Kate also valued the data meetings and stated, “And I think that's where the value of like our quarterly data meetings or mid-year meetings are. Because then you're just kind of like getting all of those updates to really see what growth is being made in there.” Veronica commented that the meetings were a very fluid process. The teams looked at the bigger picture across the school in order to determine next steps. She stated:
And then we look at do we need to shift our groups and then which students do we need to add. So it's always an ongoing fluid process. And so when we do guided reading groups, we look closely and monitor their growth in, in guided reading and then look to see do they still continue to need that in intervention or do we need to add more kids to that intervention?

Use the student and school data to assign and monitor interventions. Since Susan’s priority was reading, it was important to her that the two neediest grades were identified prior to forming intervention groups. This allowed for the maximum amount of resources to be placed at the grade levels that were in need of the most support. For Susan, the purpose of this was to ensure that the students who were in need of the most help were able to be placed in intervention groups that allowed for the smallest class sizes with the best teacher supporting them. Once the appropriate supports were in place, the CLTs determined which students were in need of an immediate reading intervention due to their reading level being six months or below grade level. After students with significant reading needs were placed, students who were less than six months behind in reading or borderline, as well as students with math needs were placed. A conversation was held regarding whether the student was in need of an immediate intervention, Tier I instruction with small group reading instruction, or Tier I and small group reading instruction in correlation with an IAT meeting for documentation purposes.

The HPS Intervention Protocol for ELA, a sample of which can be found in Appendix E, gives specific recommendations regarding placement of students in interventions after taking the PALS assessment. If the student is reading (accuracy, fluency, comprehension) and spelling on grade level, Tier I core instruction should be continued and progress should be monitored. If the student is not on grade level, then it is important to determine whether an additional diagnostic assessment should be administered in order to determine an area of focus for core instruction and
intervention. If the student is on the bubble, additional diagnostic assessments should be considered to better gauge student needs. In regard to the process of providing interventions based on area of need, Kate stated:

So I think you just have to like prioritize your needs. So which ones [students] are at greatest risk, if you will. And then also looking at what interventions can be offered to address…like you kind of like lump students together so these students have this commonality, whether it's, comprehension or fluency or you know phonemic awareness. And then what's like an appropriate intervention or response and then looking at is it something the classroom teacher can do? Is it something if it's co-taught that additional teacher can do or is it something that we need to have like the reading specialist pool within the grade level.

The reading specialist, Veronica shared her thoughts on how data were utilized to inform the CLTs decisions where student groupings were concerned.

Where the reading specialists came in was to look at the data that came from multiple sources, whether it's from teacher observation or some of the assessments that we give. And we looked at that and try to determine what kids would be able would be best serviced in a spelling extra spelling group and what kids would be best serviced in the reading group.

She also shared that at times they had to make data-informed decisions regarding students that were having difficulty in both reading and math. Although reading was priority as noted throughout, Veronica also stated that they found unique ways of ensuring students got what they needed whether by switching back and forth between reading and math or attending a math intervention afterschool.
As discussed above, Math Reflex was utilized at the beginning of the year until the teams had enough initial data on the students within each grade level to make intervention determinations. Throughout the school year, CLTs met weekly to engage in dialogue around the math data for the grade level. A learning map helped to provide clarity on how many days should be spent on various learning targets and when the common formative assessments should be given. After individually analyzing the scores, the team met to plan interventions based on the data. Students who scored lower than 100% were considered as not meeting mastery and would be placed in a math intervention focused on specific learning targets. After students engaged in a targeted intervention, another assessment would be provided and evidence such as exit tickets or pictures of student work samples would be collected.

CLTs regularly monitored data carefully as the year progressed. Teams discussed data that helped to inform decisions around interventions. Many data sources were presented at CLT meetings including student work samples, assessment data, anecdotal notes, and classwork outside of the intervention if that was pertinent to the intervention being implemented. The CLTs looked at the data across spread and time, as well as what other factors might be impacting whether or not a student was making progress before determining a change in tier or intensity.

Sarah stated:

So we really looked at that data across time and if we were recognizing that the supports we currently had in place were not having the effect we desired, you know, that student wasn't making enough gains to close the gap. We would consider, you know, factors in their own life that might be affecting their learning. Factors inside the classroom, whether there's things like language or a disability that is, you know, something that needs to be considered. And then we would, you know, looking at the bigger picture all together, we would a lot of times make that shift to a tier two or tier three.
CLTs typically monitored student progress within a reading intervention for 6-8 weeks and kept data throughout. The exceptions to this were interventions that required a longer time period, such as Reading Recovery (a 16-week program). Due to significant deficits in the students’ skills, they were kept in the intervention for the required timeframe for fidelity purposes. As the end of the window approached, a discussion was held regarding student progress, and decisions to change tiers or intensity levels were made after analyzing the data.

Tina also shared a lot of information regarding how students moved between tiers throughout RTI. In regard to moving from Tier I to Tier II, she commented that this was relatively unique to Holloway because unlike some districts that had hard cut scores, the district did not follow this model. For example, a district may have a cut score for first graders who scored below a 41 on the fall PALS assessment, which automatically placed them into an Earobics intervention. This provided them with direct and computerized phonological awareness and phonics instruction. HPS felt this was not a good practice because the current research pointed to generic interventions based on cut scores not targeting exactly what the student needed. Therefore, you did not see the expected growth in the student. Instead of utilizing these cut scores to move between tiers, she described the HPS and Chesterbrook system as follows:

What we have done is provided what is available and I more think of it as to what level of intensity do our students need interventions. So, you might start off with a Tier II level of support. I kind of take the program away and start out with the level of support…so can that student start with something three days a week for twenty minutes whether it is working with a program or a person or small group. If that's not enough, to move the needle enough for that student then we intensify it, we go up to 5 days a week, then if that's not enough we go up to forty minutes five days a week. Maybe we look at the group makeup. Maybe a group of 6 is too big and we go down to a group of 3 or maybe
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its one-on-one or whatever. I think of it more of guidance as how to intensify the level of support rather than moving for tier to tier and that's different than I think in some districts or what you'll read in the research….We need to give them what they need at the level of intensity they need so that they can help provide that early support.

Kate also shared her thoughts on making student movement between tiers or intensity levels, sharing that the teams sat down with a lot of progress monitoring data before making decisions such as these. She commented:

I would say after particularly maybe six to eight weeks in an intervention, particularly if it is something you know, you're doing every day for at least half an hour, you know, with fidelity, there’s certain growth I think that's expected with that. And if you're not seeing that growth, then kind of two things. Either one, you look at increasing the intensity. So do you do more time or do you do a different intervention perhaps? And normally, that decision making process is done with a specialist, sometimes even consulted with someone from like the RTI office....If they're not responding and they're not making expected growth, then that's where you kind of have that conversation.

Veronica also shared her thoughts on when the team might move students between tiers or intensity levels. She said that it is common for CLTs to come together and discuss how students are being supported, and whether or not a particular student may need additional support. She shared an example of this, commenting:

So, what we look at is if their need is in spelling and decoding then we provide the Orton Gillingham intervention. If they're not, we also look at it how successful they've been in our core programs such as word study, and if they're not necessarily making the success, the benchmarks and the success within that program, then what's the next tier that we need to look at.
Research Question 1b

This research question looked at how progress was monitored at Chesterbrook Elementary School. This section delves deeper into how progress was monitored in both reading and math. Information is shared from several staff members at Chesterbrook that supports how progress monitoring was implemented at the school site.

Progress Monitoring

Students who were not in need of an intervention continued on with Tier I core instruction and were assessed continuously. Students who were moved into an intervention group were progress monitored throughout their time in the group. The intervention data were discussed at each CLT meeting. Some progress monitoring tools that were utilized included Running Records, PALS Quick Checks, Orton Gillingham Level 1-3 Quick Checks Tracking Template, and exit tickets.

In order to ensure that RTI was implemented as intended, the grade level CLTs met weekly with the math coach and reading specialist. Two data sets were considered and discussed at each meeting: classroom-based assessment, anecdotal notes, observation, and exit tickets; and intervention assessment and progress monitoring. As the data were added into the spreadsheets, the CLT monitored the data across time and decided on any necessary changes. Often, the changes involved increasing the intervention length, frequency or duration or decreasing group size.

Chesterbrook utilized progress monitoring throughout the year, to help ensure that all students were receiving the appropriate supports. One of the major ways in which they monitored progress was through a school-wide Google doc, also found in Appendix H. The Google chart tracked name, teacher, ethnicity, home language, gender, and whether or not the student had an IAT, IEP, or 504, as well as whether or not they were an English Learner. For
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math, the spreadsheet tracked individual student data for beginning of year assessments, as well as quarterly assessments. The ELA spreadsheet tracked the students DRA, Word Stage for Writing, and PALS scores under one ELA tab. The spreadsheet also included a separate Interventions tab, which included the student’s name, intervention they were participating in, and data regarding the intervention. The reading specialist, Veronica shared her thoughts on the data spreadsheet.

This is something that obviously continues to grow and change as we get better at collecting data, purposeful data and all that. But each grade level has their own data spreadsheet. And what happens is at the beginning of the year, we shift the students from one grade level to the next so that, that their records transfer so the teachers can see what previous interventions they had, what levels they came in in both reading and writing and math. And so that's where we start the year. And then as we continue the year and we do our countywide assessments that we’re required to do. And all the other benchmark assessments that the teachers do, we fill out those data sheets at least once a quarter. And also at our CLTs, we constantly are updating, in particular the students that need intervention. We're constantly updating what interventions they’re having…So as more interventions come in or sometimes they are dismissed from an intervention, we're constantly looking at that. So it's, it's a weekly living document that we're constantly looking at, but it all lives in spreadsheets.

Although both subject areas utilized the data spreadsheet, the way in which progress was monitored for math and ELA differed to some degree, so I will discuss by subject area below.

**Reading.** Reading CLTs met weekly to discuss student academic progress, specifically any recent assessment data, running records, and teacher anecdotal notes. The team had frequent dialogue around the data and made changes as they deemed necessary. Tonya noted that teachers
monitored student reading progress throughout each week which included taking running records every other day as well as teacher anecdotal notes. Data were uploaded into the central Google doc template. Interventions were monitored and discussed every other week. If students either were not progressing or were making significant progress, they might be moved to another intervention group. Susan stated:

We tended to take different approaches to math and reading with respect to how often we regrouped students for intervention. In math we regrouped students more frequently because we were able to focus on more discreet skills based on the student friendly learning targets and exit tickets. But for the reading interventions students were more likely to stay with the same intervention for a 9-week quarter or possibly a semester. This was because with reading we looked at more comprehensive areas of weakness such as difficulty with comprehension of fiction or non-fiction texts, fluency or spelling difficulties. In Reading we relied more heavily on end of quarter assessments such as a DRA, a DSA or district quarterly assessments.

Sarah noted that, “In reading, it takes a long time sometimes to see that growth. Whereas in math like you have the incremental skills that students will gain quicker.” Due to the time that it took to see growth, the team continued to have discussions, but made changes on a less frequent basis than when compared to math. The dialogue was robust and allowed the teams to have a solid understanding of students’ needs. Sarah noted:

We started to just weekly at our PLC kind of have conversations about how it was going so that there weren't any shocking, you know, evolutions that occur. We were constantly staying informed as to how it was going. And so we would set small benchmarks to check in and like, this is the data we're going to look at to determine if this is working or if it's not, if we need to make an adjustment. And then at that time we would come back
together with that data. And then, decide to continue on because it's working, give it another short time benchmark If it's kind of sort of working, not really working, let's give it some more time. And then you know, like with some interventions like spell read, I mean you really have to have a big chunk of time. So that was something we considered too. Like if it is a long-range intervention, we need to do it to fidelity and really give it. Whereas some of the reteaching and stuff, we wanted much shorter benchmarks.

Kate also discussed the value of tracking data and coming together to discuss it in CLTs. When discussing their tracking system, she commented, “So over time we've gotten better at having one central place where we keep all of the data.” She also shared what conversations the CLTs had around the data from the spreadsheet, stating:

And so then because you, you want a specific amount of time for intervention, you just kind of come together and just look at that to see how are students progressing…are what commonalities? You know, the, the biggest factor I think we'd probably focus on are, are there kids in interventions who are not responding and what do we need to do? And then the other biggest question would be, are there kids not in an intervention who maybe need to be because they're not making expected growth either.

Tonya also shared the importance of monitoring the data and coming together to discuss it as a team. She ran an LLI intervention in her classroom and she shared how important it was to monitor the data from the LLI groups through running records every other day as well as teacher anecdotal notes. If one student wasn’t progressing, or another one was taking off, they would make the decision to move them to a new LLI group. At times, the LLI intervention was done in individual classrooms in correlation with guided reading groups, and changes could be made quickly and efficiently.
**Math.** The math coach at Chesterbrook stated that as teachers monitored progress throughout the week, they input their data into a central Google doc template. At each CLT meeting, the team evaluated and discussed the data from each teacher in order to determine if shifts were necessary based on their needs and their progress. If the student had progressed enough, the team would move the students back into the Tier I core instructional program. If this student had been participating in an after-school math intervention, they would simply stop attending the after-school session. On the other hand, if the student was not making the anticipated gains in the after-school intervention, the team would determine whether they should keep them in the current intervention and increase the time and/or intensity or consider a Tier III intervention. In this instance, the time and/or intensity within the intervention could be modified in the after-school session.

When teams met in their math CLTs each week, they discussed data from any assessments they gave, classroom performance tasks as well as teacher anecdotal notes. The team would discuss individual student progress as it related to the various strands. After this data-based discussion, teachers determined what skills needed to be re-taught. Students who were not making expected progress in a specific strand were moved into a math intervention that focused primarily on that strand. As concepts were retaught in different ways and interventions were provided, exit tickets were a common source of data to gain a better understanding of student progress. The data were analyzed often, as groups remained flexible. This resulted in students being shifted in and out of math interventions every 2-3 weeks, based on their needs. Interventions were provided by grade level teachers, special education teachers, and the math coach, and students often moved between teachers as new intervention groups were formed. Due to the fact that cut scores were not utilized and teacher dialogue and expertise were valued when
making determinations regarding interventions, RTI in the area of math showed many aspects of
the problem-solving model.

Susan described:

So for math, we were fortunate to have a math coach that was pretty phenomenal, she
worked closely with the PLC to identify specific daily learning targets, quick
performance assessments and exit tickets. The grade level team looked at that data every
week in PLC meetings so reteaching happened and teachers could quickly reassess
students to determine mastery. So overall I feel like math was monitored very closely
every week… I think we did a great job with reteaching (Tier I) and then we definitely
used Do The Math for students who needed more of a tier II or III intervention to
understand underlying fundamental math concepts.

Linda added:

Teachers would input [data], they were responsible for inputting for their group. And
then in CLT as a team we would evaluate it to determine if students needed to be shifted
based on, on their needs and their progress. I'd say we made shifts. Every grade is a little
different, but I do think that because pretty consistently, I'd say shifts were made every
two to three weeks.

Research Question 1c

This final research sub-question looks at the fidelity of implementation of RTI at
Chesterbrook. As mentioned earlier, the consistent components of RTI include (1) fidelity of
scientifically validated, research-based interventions, (2) data-based decision making, and (3)
progress monitoring system. (Fuchs & Fuchs, 2001; Buffum, A., Mattos, M., & Weber, C.
(2009). Although the first component is written as one, there are really two integral parts to this
including (1) scientifically validated research-based interventions and (2) fidelity of
implementation. Similarly, although my research question combines both of these parts, I will address the findings in two parts as listed above.

**Scientifically validated research-based interventions.** In order to learn more about scientifically validated research-based interventions, I spoke with Tina, RTI Coordinator for Holloway Public Schools. In regard to scientifically validated research-based interventions, Tina stated, “So as a system the interventions that come out of my office or ELA or math we only pick ones that are research based. And that's part of our selection protocol.” When Tina moved into her new position, many scientifically validated research-based interventions such as Read 180, Reading Recovery, Read Naturally, and Spell Read were already in place across the county.

Shortly after she began, a parent group became very vocal about their interest in Orton-Gillingham (OG) as a multi-sensory approach to working with students who have dyslexia. At this time, dyslexia was a hot topic in the parent community, and due to this increased interest, Tina, the Director of Special Education, and the Supervisor of English Language Arts began an OG pilot in four elementary schools; two Title I schools and two non-Title-I schools. For the pilot, 15 teachers were trained across the four buildings. The pilot team strategically targeted kids and monitored their progress. After a favorable response from the pilot, OG became accepted as an intervention, and Tina began the process of integrating it into all elementary schools first, before expanding to middle and high schools. In regard to the expansion, Tina stated,

Centrally, we select the intervention through a team and then we ensure that each school has a team of teachers trained in those interventions, so they can offer them, and we offer guidance on how to select them (the teachers) but in the end, we have to trust that the schools are selecting and we do spot checks here and there.
Another intervention that was adopted during Tina’s tenure as coordinator was the Leveled Literacy Intervention (LLI). For this intervention, the Title I schools were already utilizing LLI with great success. At the end of the year, a significant amount of close out funds were available, and Tina was approached in regard to utilizing the funds. She spoke with the principal group, and all were interested in obtaining LLI for their school buildings. Tina was able to purchase the remainder of the elementary schools with the entire LLI series, and all middle schools with the last three levels in the series. Trainings are held in each, and there are a number of staff in each building who are skilled in the intervention, often including the reading specialist(s) and several teachers enabling them to hold intervention groups.

Although the majority of interventions are adopted at the county level, there are select times in which interventions might be implemented on a school by school basis. When speaking about Chesterbrook Elementary, Tina spoke of a few outlier students that were not making the expected progress. The school had reached out for support, and Tina worked to help ensure that the needs of the students were met. Tina said,

> When we need to select something that is not adopted by the county, we work with a team at the school and we spend some time researching the internet, what works clearinghouse, and we go pretty deep. We do a pretty close data analysis and observe the student and then we may purchase a one off to see if it would work for the student.

Tina mentioned that there have been two other interventions that she helped to support Chesterbrook with along the way due to several outliers. In regard to her role in this, Tina stated, “My role was helping to problem solve, helping to select, setting up training and follow up.” Assistant principal Kate also commented on Tina’s assistance with finding additional support for students who were not making the expected progress and said that if they were truly stuck and
weren’t sure what to do, they would ask Tina’s office for support and perspective on what was going on with the student(s).

**Fidelity of implementation.** Buffum, Mattos, and Weber (2009) defined fidelity as the degree to which a program or intervention is implemented as intended. Burns and Gibbons (2008), Kovalewski (2007), and Shinn (2007) stated the fidelity of implementation was one of the most important components when implementing RTI. When asked about fidelity of implementation, Tina had several thoughts related to the topic.

In terms of fidelity of implementation how is it ensured, a lot of that is up to the school to ensure. It’s…we have some [interventions] that are computer based that I could go in on a regular basis and I could at least see that they are being used but so many of ours are not. OG, LLI, they're…all I can do is provide the info to the schools with here it is how to be implemented with fidelity and here's how it needs to happen. We work with reading teachers and math coaches to provide that support to teachers. We provide support to principals and assistant principals but in the end the way it is structured now it is really up to the school administration to ensure that it is.

Tina also referenced the online system that could be employed to capture intervention plans for several of the interventions in place. Utilizing the district-wide Student Information System (SIS), teachers were able to enter in information about their intervention plan, including the length of the intervention, start and end dates, students within the intervention, the individual student goals, and monitor progress throughout. This could all be found under the RTI tab in the SIS. Although Tina was able to access intervention plans from teachers across the district, she noted that it was difficult to monitor centrally given that she isn’t in the buildings with the staff and students and interacting with the data directly. However, this was a tool that helps to support monitoring for fidelity by staff members as well as administrators.
Fidelity of implementation at Chesterbrook was mentioned in a number of ways throughout the interviews. Susan was very strategic about creating the intervention block, and specifically created the Cougar Block to support fidelity of implementation. She commented,

You know, intervention doesn’t always have to be explicitly in a specific intervention time block, but I think we wanted it to be really intentional and transparent at the beginning of our intervention implementation. Sometimes when intervention is embedded in the regular academic block, reteaching or comprehensive intervention doesn’t happen with fidelity or consistency. We were really worried about that and wanted to make sure intervention happened consistently over time. we also recognize that we needed to put the most skilled people with the kids who are the neediest.

As discussed earlier, Susan identified the two neediest grade levels for math and reading, and then created the Cougar Block around those two grades, which allowed for the most skilled individuals to have access to the students with the highest amount of need.

Another way in which fidelity was discussed was in regard to prioritizing the intervention block time. Unfortunately, several staff members stated that the Cougar Block was often one of the first things to go when conflicts arose. Tonya the 3rd grade teacher who made the shift to 5th grade during the full implementation year said,

I mean the second there is a schedule change or somebody is absent, a teacher's absent, you know, we have an assembly, it's the first thing to be cut. Because then you would need to take those 30 minutes and pack them into a block somewhere. So truthfully, fidelity wasn't totally met.

Sarah, the 5th grade teacher also acknowledged the same issue with the Cougar Block stating:

We had to work out a lot of kinks just because of timing, because it was a set timeframe. If there was an interruption to schedule, a lot of times it was the first thing to go. And so
we had to get creative over time too, because we really valued it and we saw the impact it was having. So we wanted to try to alleviate the, you know, the chopping off of that time because it made it so inconsistent and then the intervention is not effective. So as a team we had to prioritize that time to ensure that it was happening at least four days a week.

Even with these schedule shifts, staff recognized the importance of prioritizing time and ensuring that appropriate intervention time was allocated, especially for students in interventions such as OG or Spell Read, which should be provided four and five times per week, respectively. When discussing the importance of prioritizing this intervention time as well as the benefits that come along with doing so, Tonya supplied,

…they all did grow in reading, like the kids that my uh special ed teacher did the spell read with like made tremendous progress. And then she also did, but they also had like homework and then she would see them after school on days she missed. She would like pull them in reading block. So like she made sure that she was seeing these kids every day, no matter what the schedule was. The fidelity for her was better. Just wasn't in that… always in that 30 minutes [block].

Program fidelity was also discussed, specifically in regard to programs such as Orton-Gillingham and Reading Recovery. Students who were in these interventions typically had more significant deficits that may not be “fixed” immediately, so students remained in the intervention for the recommended timeframe for the fidelity of the program. Susan commented:

Our Tier III interventions did look a little different than Tier I and II. For example, Reading Recovery is designed as a 20-week, 30 minute a day, one-on-one intervention and Orton Gillingham (OG) is a very explicit, multi-sensory approach to developing letter-sound knowledge. Both programs provide daily monitoring of student progress and we do keep students in these programs for a minimum of 20 weeks. Even if progress is
slow we still are going to keep them in reading recovery or OG for the 20 weeks to ensure integrity of the program. This also allows us to compare a student’s progress against established norms, resulting in better instructional plans for struggling students. With some students you need to realistically commit to providing intervention for a longer period of time. A student with significant dyslexia is going to need a long-term reading intervention to support them as they develop into a proficient reader. If a student’s progress continues to be slower than expected, additional supports or different interventions need to be considered.

Reading and math specialists helped CLTs to consider what else might need to be done, if a student was not progressing through an intervention as expected. The CLTs were following the four-step cycle of identifying learning targets, creating common assessments, and analyzing formative and summative assessment results, while providing interventions as necessary. Appendix I shows a student data tracking sheet, My Multiplication and Division Learning Targets for SOL 3.5 which shows the work that the CLT was involved in throughout a unit. Throughout the cycle, teachers would monitor for fidelity by looking at student work products, assessment data, and what the teacher was doing in the classroom. Students were grouped throughout the cycle as data were analyzed and interventions were put into place based on student need. Specialists would also ensure fidelity by checking in with individual teachers and ensuring they had what they needed in order to implement the intervention effectively. Appendix J Summary of Data/Targeted Interventions shows how students were placed into intervention groups during the trial Cougar Block intervention time after reviewing the data from formative and summative assessments.

Summary
To best support Holloway Public Schools and Chesterbrook, the RTI Office developed several documents including the RTI Process within the CLT Framework, five-year framework and the Intervention Protocol Documents for K-5 and Secondary. The RTI Process provided a process for moving through RTI which included all students receiving universal screening, CLTs determine student needs in regard to interventions, teams determine who will deliver interventions and monitor progress (including entering data into the RTI system), intervention is implemented, and CLT reconvenes after 4-6 weeks to analyze progress. If the intervention was successful, the intervention should be continued and monitored, so that CLTs can reconvene again to discuss next steps. If the intervention was not successful, the flow chart suggests that the intervention can be modified or changed and monitored before reconvening to discuss next steps, or and the CLT can make an IAT referral at this point. The Flow Chart found in Appendix K helps support schools in the beginning stages of RTI implementation and provides a process in which to follow.

The five-year framework provided clarity around the long-term goals for HPS, as well as strategies and supports to help accomplish each of the goals. It provided school administrators with an understanding of the RTI expectations throughout the five-year implementation period, as well as a more specific breakdown of these expectations. The intervention protocol documents provided resources for the intervention portion of the RTI Process within the CLT Framework, by helping CLTs determine a focus for their Tier II and Tier III interventions. After students received the Universal Screening Assessment and teachers identified student areas of need, the Intervention Protocol provided additional diagnostic assessments, as well as strategies and interventions to support the area of need. School teams often referred to this document to better support their data-based decisions within the RTI Process.
Four categories materialized as the interviews were completed which include: a) fidelity of scientifically validated, research-based interventions which will be broken into two parts; fidelity and interventions, b) data-based decision making, c) progress monitoring, and d) a systems approach. The first three categories are aligned with Fuchs and Fuchs (2001) as well as Buffum, Mattos, and Weber (2009) who found fidelity of scientifically validated, research-based interventions, data-based decision making, and progress monitoring system as consistent components across Response to Intervention. They are also aligned with the research questions presented within this study.

The interviews with the RTI Coordinator, administration, and staff at Chesterbrook Elementary School provided data that was consistent with the RTI Process within the CLT Framework, Five-Year Framework, and Intervention Protocol documents. The interviews provided more clarity into how the district implemented RTI, and their reasoning behind utilizing a mixed approach to the problem-solving model and standard protocol model. They also provided an in-depth look into RTI implementation at Chesterbrook, and how their process aligns with the three consistent components within Response to Intervention.
Chapter Five

Conclusions

The primary purpose of this study was to examine and describe how one elementary school in the mid-Atlantic region implemented Response to Intervention. At the beginning of the chapter, I will discuss both my findings and conclusions from this study, and in culmination present implications and recommendations for Response to Intervention at Chesterbrook Elementary School. The discussion will highlight the findings from the research question and sub-research questions below:

1. How did the subject elementary school implement RTI?
   a. How did the school site utilize data?
   b. How was progress monitored at the subject elementary school?
   c. What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes?

Discussion

The framework of this study was based on research from Fuchs and Fuchs (2001) and Buffum, Mattos, and Weber (2009) who stated that while there is flexibility in how schools implement RTI, the three consistent components of RTI include (1) data-based decision making, (2) progress monitoring system, and (3) fidelity of scientifically validated, research-based interventions, These three components as well as my knowledge of RTI supported the development of the interview questions. The document analysis protocol employed by Collins (2014) adapted from (Merriam, 1988, p. 121-122) helped guide the document analysis. The categories and themes that emerged from the data analysis will be reviewed in the subsequent sections.

Essential RTI Components
Data-Based Decision Making

The staff at Chesterbrook Elementary School analyzed the universal screener results from the universal screeners prescribed by Holloway Public Schools, as well as other forms of data including data from the prior year. This allowed them to make the most informed decisions about students in need of interventions and additional support. It was important to the staff at CES that the students with the most significant needs had access to the highest levels of support. The staff had a clear understanding of how to collect data and that it needed to be recorded on the google doc for CLT review each week.

Fuchs et al., 2003 and Sattler & Hoge, 2006 note that schools typically use either a standard protocol or a problem-solving protocol when implementing RTI. Within the standard protocol model, students are placed in intervention programs based on pre-established qualifications criteria (Buffum, Mattos, & Weber (2009). The students participate in universal screening assessments, and the staff analyzes the results in order to make decisions regarding interventions. In the standard protocol model, students below a cut score typically receive a specific intervention, whereas those above the cut score are not provided interventions.

Whereas the standard protocol lends itself to consistent implementation across the school staff, a problem-solving approach supports individual student differences by implementing interventions that support the students’ area of need. The problem-solving protocol is a team approach to determining and designing individualized interventions based on student need (Barnes & Harlacher, 2008). This protocol is unique to each student, as data for students slightly below and above the cut point are looked at individually, and learning plans are developed based off of individual needs (Fuchs & Fuchs, 2006).
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Standard Protocol at Chesterbrook. Chesterbrook’s Response to Intervention protocol had components of the standard protocol model. Students participated in universal screening assessments several times throughout the school year. The results are analyzed and help to determine the appropriate interventions for students.

The standard protocol approach helped support RTI at Chesterbrook through homogenous grouping. After the data were analyzed, students were homogenously grouped within tiered interventions which allowed for the staff at Chesterbrook to provide students with instructional programs in addition to Tier I core instruction. This allowed Chesterbrook the ability to offer programs such as Leveled Literacy Instruction, Orton Gillingham, and SpellRead in order to meet the needs of all students.

Slavin’s (1987) research noted that an advantage to homogenous grouping was that instruction could be adapted in order to best meet student instructional needs. Loveless (1999) also notes that when high achieving students are placed in mixed ability classes, it is unmanageable for the teacher to instruct students in high level literary components and phonics synchronously. On the other hand, those who are not in favor of homogeneous reading groupings criticized this practice stating that when students are placed in same ability groups it lowers their self-esteem and motivation, specifically in poor readers, as well as widening the achievement gap between good readers and poor readers (Hiebert, 1983; Rosenholtz & Wilson, 1980).

When asked about homogenous grouping and whether there were any concerns with this, Kate provided her thoughts on this grouping style. She stated that although the students were broken into homogenous groups, every single student at Chesterbrook had the opportunity to participate in enrichment activities such as coding and chess throughout the year. If a student was participating in an intense intervention, they typically experienced the enrichment after spring
SOL testing. Other enrichment activities such as book clubs were accessed by all students throughout the year, with some students working on reading strategies as an enrichment activity while other worked on strategies during an intervention book club.

The Standard Protocol Model was also seen within the Holloway Public Schools intervention protocol documents. Teams utilized this resource after analyzing data from universal screeners, assessments, teacher anecdotal notes, and more. The document provided teams with knowledge on which interventions match with weaknesses or areas of growth. In the standard protocol model all students within an intervention group receive the same intervention determined from a specific area of weakness. Chesterbrook Elementary School used the intervention protocol documents in their meetings to help determine which intervention was appropriate in order to best meet student needs.

*Problem-Solving Protocol at Chesterbrook.* Different elements of the Problem-Solving Protocol were seen in Chesterbrook Elementary School’s RTI Implementation. One way it was seen was in how cut scores were utilized. Although cut scores were used as a reference point, Chesterbrook did not follow a black and white approach when it came to using these to determine interventions. Reading utilized a major component of the problem-solving model in that if a student was reading six months or more below grade level, they were automatically placed in a reading intervention, being sure to identify their specific areas of need. Bubble students, or those six months or fewer below grade level were not immediately placed into an intervention group, rather the team had a thorough conversation before determining whether or not the student would receive an intervention or continue to be monitored.

In Math, students were assessed regularly through a variety of evaluation methods. The grade level CLTs and math coach analyzed the data and determined methods for re-teaching the content. If the area of weakness persisted, teams developed individualized interventions based on
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areas of weakness. Interventions in the area of math are lacking in Chesterbrook, therefore a lot of time was spent on both re-teaching and the creation of interventions to ensure that students received the support they needed to access the curriculum effectively. This is aligned with the problem-solving model in that a problem-solving team determining and designing an individualized intervention for students based on need. In this case, the CLT assesses regularly and evaluates the data in order to design an appropriate intervention for all students in need of support.

Math was more closely aligned with a problem-solving protocol, in that the interventions utilized were individualized based on student needs. As teams discussed student progress, specific skills that required re-teaching were agreed upon. Exit tickets were a priority, and the primary method of gathering data on student understanding and progress. Teams continued to monitor data, and grouping were flexible to allow for student movement in and out of math interventions every two to three weeks.

One example of a problem-solving model was developed by the Heartland Educational Agency and Gustafson (Ikeda & Gustafson, 2002). Within this model, Level 1 is evident in the classroom as well as being evident both through intervention as well as parent teacher communication. Within Level 2, a referral to a school-based team is made, and the team works collaboratively with the classroom teachers to create and monitor an intervention. If the student is unsuccessful in Level 2, the intervention is evaluated and appropriate changes are made in Level 3. Level 4 is equivalent to a referral to special education.

Chesterbrook was aligned with many elements of the problem-solving model. Tier I was similar to Level I in that interventions are classroom based and provided by the classroom teacher. If this is not successful, students are moved into an intervention, and a referral to IAT may be made. If students are still not successful, the team reconvenes and discusses any changes
or modifications that may need to be made to the intervention with the final step being a referral to special education.

*Hybrid Model at Chesterbrook.* Schools should ultimately employ either the standard protocol or problem-solving protocol to determine how to best respond to student needs. While some schools choose to implement just one of the protocols, others choose to incorporate features of both standard and problem-solving protocols to form a hybrid model (Barnes & Harlacher, 2008).

Chesterbrook produced its own unique model because the school did not adopt a strict standard protocol model, problem-solving model, or hybrid model. Rather, school staff utilized different approaches based on the subject area of math or literacy. It is important to keep in mind that this study looked specifically at the first year of implementation. Although Chesterbrook implemented RTI in a streamlined approach, there were also several lessons learned throughout and modifications have been made over the years to continuously improve the process and ultimately impact student success.

While math employed more of a problem-solving protocol, reading used a mixed approach between problem-solving and standard protocol. Given the prevalence of universal screening tools for reading, teams relied heavily on data from these throughout the year. However, while cut scores were used, they were not utilized to the same extreme as the standard protocol method outlines. Rather than place anyone below the cut score in a specific intervention, Chesterbrook applied more flexibility when grouping students. If a student was more than six months behind in reading, they were moved into an intervention automatically, and one was chosen based on their areas of need. Students who were on the bubble, or within six months of being on grade level were not moved into an intervention immediately, rather the data were analyzed closely by the team before determining next steps. County documents helped to
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support this as resources outlined areas of need and additional assessments that could be referenced as well as specific interventions to support student needs.

*Data-based decision making in conclusion.* Schools have complete independence when choosing which protocol to implement in their building, whether the standard protocol which is set and specific, or the problem-solving protocol which is unique and created for each individual student (Barnes & Harlacher, 2008). While many schools implement the standard protocol, problem-solving protocol, or a hybrid of both; Chesterbrook chose to navigate this differently.

While the school implemented more of a hybrid approach for reading, Chesterbrook employed a problem-solving approach for math which allowed for more individualization among interventions. One reason for the problem-solving approach for math was the lack of math interventions within Holloway Public Schools, when compared to reading. The math teams created the majority of math interventions on their own with the exception of a few math interventions. This approach was unique to Chesterbrook, however it allowed for significant flexibility. Other schools might consider utilizing a similar approach in that if one method does not work for both subject areas, it provides the school with an opportunity to make adjustments that meet their needs. While not the traditional method of implementing RTI, the leaders at Chesterbrook Elementary School based their decisions off of their school data as well as considering what would work best for the population of students they were serving.

While the protocol model prescribes very specific interventions for students, the problem-solving model features individualized intervention plans that are specific to each learners’ needs (Searle, M, 2010). While many schools choose to employ either the standard protocol model or the problem-solving model, the hybrid model offers a new alternative, allowing schools to implement features from both models (Barnes & Harlacher, 2008). In 2008, the Special Education Leadership and Quality Teacher Initiative conducted a study that asked each state
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department to share their perspectives on RTI. Out of 42 responding state education departments, over half recommended a combination of the standard protocol model and problem-solving model, essentially endorsing a hybrid model. Thirteen state departments recommended the problem-solving model, while only one recommended a stand-alone standard protocol approach (Hoover, Baca, Wexler-Love, & Saenz, 2008). Using a hybrid approach to implementation helps to ensure that students are receiving the benefit of an individualized intervention plan that the problem-solving protocol calls for, while simultaneously guaranteeing that the strategies utilized are the research-based interventions that the standard protocol model suggests.

**Progress Monitoring System**

In order to monitor and respond to student needs in Tier I, II, or III instruction, schools monitor student progress through the use of assessments. Fuchs and Fuchs (2006) state the progress should be monitored at least one time per month, but the ideal recommendation is biweekly or weekly. In the direct method of progress monitoring, a universal screening assessment is provided to students once at the beginning of the school year. Students who perform below the predetermined cut point move directly into a Tier II intervention. While a benefit of the direct method is that at-risk students are identified quickly and provided with access to interventions immediately (Jenkins et al., 2007; Vellutino, et. Al., 1996), a disadvantage is that students are identified and moved into a Tier II intervention based off of only one piece of evidence that may not indicate the child’s ability. In the progress monitoring approach, students are given universal screeners and any students deemed at-risk are monitored prior to being moved into a Tier II intervention. Although more dependable than the “cut-score” approach of the Direct method, Hughes & Dexter (n.d.) believe that it postpones interventions for students who need significant support.
**Progress monitoring in reading.** In regard to reading, Chesterbrook applied components from both the direct method and the progress monitoring approach. One major component of the direct approach used at Chesterbrook was the universal screener assessment given to all students at the beginning of the year. Data from the universal screener were reviewed at the beginning of year meetings to help make determinations around interventions for students. There was consistency with the use of the fall universal screener as all grade level educators teaching reading administered the assessment. Although the school teams also relied on data from the previous school year, groups were created after data from the universal screener was analyzed. Students who were reading six months or below were automatically placed in a reading intervention.

Although in the direct method, universal screener scores from a one-time assessment help to determine Tier II status (Hughes & Dexter, n.d.) Chesterbrook still gave students universal screeners at the beginning, middle, and end of the year to track student progress. Although screeners were given more frequently than the initial screener that the direct method references, students were not moved directly after results from these additional screeners were given. As mentioned earlier in Chapter 4, many of the reading interventions recommended students participate for a set amount of time before moving out of the intervention. Reading Recovery is one example that requires students to remain in the intensive reading program for 16 weeks.

Chesterbrook utilized a component of the direct method in that the primary source of data for the current school year came from the initial beginning of year universal screener, however they also applied one major component of the progress monitoring approach as well. As noted above, students reading six months or below reading level were automatically placed into an intervention which is characteristic of the direct method. However, students who were reading six months or fewer below grade level were not immediately placed into an intervention group,
rather the team had a thorough conversation before determining whether or not the student would receive an intervention or continue to be monitored. Progress monitoring was frequent, and teachers reviewed and analyzed new student data such as running records or PALS Quick Checks weekly.

The Chesterbrook schedule was developed to allow for significant reading support to be provided during the ELA blocks for the neediest grades in regard to student need. After the schedule was determined, grade level teams continued to have dialogue around student needs in order to agree upon next steps for the student. These steps included moving the student into an intervention, continuing Tier I instruction and small group reading support, or hold an IAT meeting to put a plan into place and discuss additional supports for the student.

Progress monitoring in math. Chesterbrook was more in line with a progress monitoring approach for math, as they did give a universal screening measure, the Math Inventory (MI) three times throughout the year. They did not rely on the scores of the MI to create their RTI groupings, rather they relied on a variety of data to inform their decision making. The Math Inventory was given consistently across the board at Chesterbrook, but the results were used inconsistency with regard to data-based decision making. As mentioned above, Linda noted that the MI was not utilized when forming intervention groups at the beginning of the year, rather the grade level teams reviewed many other data forms including data from the prior year, teacher anecdotal notes, and beginning of the year assessments.

Staff members updated the google doc spreadsheet which allowed teams to track individual student data. Progress monitoring in math was completed weekly through the use of teacher created Learning Target Assessments as well as variety of other methods. Assessment data were recorded as well as intervention data. The spreadsheet was reviewed at weekly CLT
meetings as well as mid-year data meetings, allowing all staff members to see student data, and make informed data-based decisions to best meet the needs of all students.

**Progress monitoring in conclusion.** Jenkins et al. (2007) stated that there are two methods to determine Tier II status; either the Direct Method or the Progress Monitoring Approach. However, Chesterbrook did not choose to fully implement the Direct Method or the Progress Monitoring Approach to identify and place students in the appropriate tier. Chesterbrook’s data collection occurred at several points throughout the year, including providing universal screeners to all students at the beginning of the year. All of the study participants were aware of and used the available universal screeners consistently for both math and reading. The reading teams utilized components from both progress monitoring methods, whereas the math teams did not rely heavily on the initial universal screeners and therefore aligned more closely with the progress monitoring method.

Regardless of which approach a school or district choose to implement, for RTI to be effective, students must have access to progress monitoring through universal screeners or another form of assessment system which helps to determine student achievement (NASDSE, 2006). Jenkins et. al. (2017) also noted that the progress monitoring should match each student’s instructional level. This is important because if a student is performing below grade-level, progress monitoring tools that are associated with the specific grade level are not likely to assess growth in student progress. Schools should determine which progress monitoring system they are going to adopt in order to ensure that the academic progress of students is being assessed, as well as the effectiveness of the instruction.

**Fidelity of scientifically validated, research-based interventions**

Burns (n.d.) notes the importance of questioning whether or not an intervention is scientifically research-based, as these interventions include studies that represent strong evidence
for the use of the intervention. The interventions at Chesterbrook Elementary School were all scientifically validated, research-based interventions that were provided by Holloway Public Schools. Several of the interventions were in place when Tina began as the RTI Coordinator, while several others were piloted at the elementary level before being adopted by HPS.

In the case of Chesterbrook Elementary, when there was a student who was considered an outlier, and not making progress after engaging in the available interventions, school administration worked closely with Tina to observe the student and their data in order to find an intervention that might be more suitable. Aside from these occasional cases, all interventions come out of central office after being approved by the RTI Office, and all schools within the county have access to age appropriate interventions that are scientifically validated and research based.

Fuchs & Fuchs, 2001; Buffum, A., Mattos, M., & Weber, C., 2009 state that there are three essential components of RTI, one of which includes fidelity of scientifically validated research-based interventions. An important component of RTI is providing scientific, research-based instruction as well as intervention, that meets the needs of all students. Marzano et al., (2001) states that teachers should be utilizing scientific research-based instructional strategies. Hughes & Dexter (2008) also agree that when scientific, evidence-based Tier I instruction is used in the classroom by educators, inadequate instruction cannot be used as a reason for lack of student progress.

The National Center on Intensive Intervention states that evidence-based intervention at the Tier II level means that rigorous research has proven that when the intervention has been implemented with fidelity, that it has had a positive impact on the target outcomes for students at risk in that area. At the Tier III level the individual implementing the intervention is doing so with fidelity, ensuring that the interventionist is analyzing student data frequently and making
adaptations as needed. (Levels of Intervention, n.d.). The National Center on Intensive Intervention also provides several resources for schools including academic intervention tools chart and behavioral intervention tools chart for Tier II interventions, and Literacy strategies, Mathematics Strategies, and Behavior Strategies to Support Intensifying Interventions for Tier III. These resources will help to support schools in ensuring that their Tier I, Tier II, and Tier III instruction and interventions are scientifically validated research-based which will help to meet the needs of all students.

**Systems Approach**

According to Fuchs and Fuchs (2001) and Buffum, Mattos, and Weber (2009), the three consistent components of RTI include (1) data-based decision making, (2) progress monitoring system and (3) fidelity of scientifically validated, research-based interventions. In this study, there were four themes that developed, three of which are aligned with the three consistent components of RTI. The fourth theme that emerged was a systems approach, which will be detailed more below.

This fourth theme was developed from several comments made by the interview participants that when analyzed together, created a theme centered around systems. Six participants noted that RTI was developed due to the need for a more systematic approach as opposed to teacher by teacher. Evidence of this was provided by Susan, who stated “It also made me realize that we needed a more systematic approach to intervention that wasn't a teacher by teacher approach.”

Five participants also noted the importance of a solid Tier I core instruction. Interview participants stated the need for a strong core instructional program and the ability to reteach and support student needs in the classroom first. Kate discussed the need for staffing shifts, sometimes to support intervention, but other times to support core instruction. She recognized
the value of the core instructional program and noted that is where the bulk of the work needs to be done.

The administration team felt it was important to have a rotation system developed prior to implementing RTI in a full capacity. The third-grade team participated in the trial. The leadership team developed a color rotation system and were very intentional about the way in which students rotated throughout the Cougar Block. The developed system was used during the trial as well as during the full implementation throughout the 2016-2017 school year.

Another illustration of a systems approach was the method that Chesterbrook used to create their RTI schedule. At the end of the school year, the administration team with the support of the math and reading coaches reviewed the data from the year. They looked at needs across the entire school and in an effort to maximize resources, they worked to create an RTI schedule to match needs so support from math, reading, and special education could be provided. The schedule was created by determining the two grades in need of the most support in reading.

As Ciolfi and Ryan (2011) discussed in their research, although many schools and districts have implemented RTI, the implementation approach and interventions have not been consistent, so there is no consensus regarding these. It is for this reason that more clarity surrounding effective RTI implementation, data utilization, and how progress is monitored would be helpful in better understanding how to implement RTI. However, in the case of Chesterbrook Elementary School, their non-standard implementation of RTI was unique and could also be considered a strength in that it demonstrates flexibility to ensure that student needs are being met. Chesterbrook’s non-standard implementation approach had two differences worth discussing.

_Tiers and Intensity._ Although there is a lack of consensus on implementation methods, there is some agreement among researchers when it relates to the basic RTI structure. If a student
is struggling and it is determined that they are in need of additional supports outside of Tier I classroom based instruction, a Tier II intervention is provided to them, often in a smaller group setting outside of the classroom. This intervention is monitored and data is collected and analyzed to determine student responsiveness. Those who are successful move back into solely Tier I instruction, while those that are not successful may receive another round of the same intervention, often with varying intensity or time, or move into a Tier III intervention (Ciolfi & Ryan, 2011).

While the structure described above is one recognized by researchers, Holloway and Chesterbrook follow a more unique approach when determining interventions for students. Although the school utilized three tiers of instruction, student movement between tiers was not always done in the manner described above. Rather than simply moving from tier to tier, the intensity of the level of support was the focus area. The district felt that moving students into an intervention based off of an assessment score does not always lend itself to targeting individual student needs. If a student was accessing Tier I, and the team determined that a Tier III intervention was necessary for the student, they would not hesitate to move the student into the Tier III intervention, rather than moving them into a Tier II prior to accessing the Tier III.

The team considered what level of intensity the student required in their access to interventions. This allowed Chesterbrook to provide students with the support they needed at the appropriate intensity level. Although the various methods of implementation may often be looked at as an area of weakness, Chesterbrook turned it into a strength by finding an implementation model that worked for them and the students they were serving. They did not operate under a “one size fits all approach,” and subsequently had flexibility when designing their approach to RTI to ensure that all students needs were met.
**Scheduling.** By creating an intervention block at a specified time each day, schools are able to provide students with specific and targeted interventions during the RTI block, while at the same time, preserve classroom instructional time. All other scheduling decisions are tailored in a way that allow for students to access interventions during this block that is free from any other grade level content including specials. This is especially important for students who are already identified for special education, or those who are moving through the identification process, as this design ensures that they do not miss pertinent grade-level core content while simultaneously being pulled for interventions (Dallas, 2017).

Chesterbrook followed this model in that their Tier I instructional time was reduced by thirty minutes to allow for the creation of their Cougar Block across grade levels. This time was spent offering both intervention and extension activities that targeted student needs. One major difference was that Chesterbrook created a schedule in which each grade had their own individual intervention block at a different time throughout the day, as opposed to one specific school-wide intervention block. The major reason behind this decision was that each grade level had access to the best teachers for their intervention block, which allowed for these educators to work with the neediest kids in each grade level.

Ultimately, the decisions that were made at Chesterbrook Elementary School also considered the needs of the students. They worked to create a system and schedule that targeted individual student needs, and allowed for flexibility to ensure these needs were being met. Although a lack of consistent implementation is a common critique of RTI, in this case it can certainly be argued that it was a strength that Chesterbrook was able to utilize a flexible approach which allowed for all students to access the necessary supports to ensure student success.

**Implications and Recommendations**
It is up to professionals to determine whether or not the findings and recommendations from this study are transferable to other settings, or in future studies. This study focused on one elementary school in the mid-Atlantic region. The findings from this study could be utilized for future research in elementary schools that are beginning the RTI implementation process. Based on the research findings from Chesterbrook Elementary School as well as the review of literature, several considerations emerged:

**Data Based Decision Making Finding 1:** Chesterbrook produced its own unique model as the school did not adopt a strict standard protocol model, problem solving model, or hybrid model.

Implication: RTI Model Selection: Given that there are two widely accepted RTI models of the standard protocol model and the problem-solving model, school leaders and teams should research and evaluate both models and consider any potential limitations prior to beginning implementation. This will allow the school teams to make an informed decision regarding model selection, or the development of a hybrid model.

**Data Based Decision Making Finding 2:** While most schools implement the standard protocol model, problem solving model, or hybrid model consistently, Chesterbrook implemented a different model in math than they did in reading.

Implication: RTI Model for Math and Reading: There were differences in the implementation of RTI with regard to math and reading. Reading implementation relied on universal screeners for data to inform groupings, whereas math did not utilize universal screeners heavily for grouping. Reading utilized cut scores to make informed decisions about students in need of support, whereas math did not utilize cut scores. Students in need of reading interventions were provided support
for longer periods of time with a discussion and movement typically occurring at the end of the quarter, while math looked at all available data, re-taught concepts and moved students in and out of math interventions on a regular, fluid basis. There were some significant differences in implementation, with math taking a more proactive approach. Given the teams were discussing data regularly, Chesterbrook should consider reading intervention changes on an as-needed basis as opposed to quarterly.

*Progress Monitoring Finding 1:* Chesterbrook did not implement the Direct Method or Progress Monitoring Approach fully when identifying and placing students in the appropriate tier.

Implication: Given that Chesterbrook did not fully implement the Direct Method or the Progress Monitoring Approach, they were able to be more flexible in their approach to how students access tiers. If a student had not accessed a Tier II intervention but was in need of a Tier III intervention, Chesterbrook moved them into the Tier III intervention. Schools should consider an approach that ensures all students needs are being met, regardless of which model they choose to implement.

*Fidelity Finding 1:* All interventions should have an approval process to ensure that all schools have access to age appropriate interventions and instruction that is scientifically validated and research based.

Implication: Ensuring that all schools have access to scientifically validated and research based interventions as well as that they are implementing scientific evidence-based Tier I instruction helps to guarantee that inadequate instruction is not a reason for lack of student progress.
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Systems Approach Finding: A trial implementation allowed Chesterbrook to develop a systematic approach to the full implementation, and incorporate a schedule that would ensure that all student needs were being met.

Implication: RTI Trial Implementation: Implementing RTI in a school can be a large undertaking and requires that school leaders and staff understand the importance and benefits of RTI. A trial implementation provides school teams with an opportunity to implement it on a smaller scale and determine what worked well and what might need additional support before a full implementation is attempted. The trial was beneficial to Chesterbrook in that it allowed school leaders to understand the importance of putting the most skilled staff with the students in need of the most support, as evidenced in their schedule creation. It also provided the third-grade school team to have ownership of the process, and share their experience around implementation with the rest of the school staff.

Additional Recommendations:

1. Universal Screeners: It is recommended that Holloway Public Schools provide access to a variety of math universal screeners that are appropriate for all elementary grades. Once identified, all educators utilizing the new screeners should be provided training on how to administer the assessment and analyze the results. This will provide additional data to school teams which will better allow them to determine student needs.

2. Behavioral Interventions: Continue developing a tiered system of behavioral interventions. HPS has several including Unstuck and on Target, Zones of Regulation, and Responsive Classroom. Chesterbrook should ensure that all staff
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members are trained in one of these approaches to help support behavior school-wide.

3. RTI Manual: Chesterbrook should consider creating an RTI manual to ensure that all staff members understand the expectations, as well as policies and procedures surrounding RTI. It could also help provide clarity around the model utilized at Chesterbrook. The manual should be based off of the HPS manual, with reference to interventions, resources, assessments, and instruction that is specific to Chesterbrook Elementary School. This will help provide more consistency as well as fidelity of implementation.

4. RTI Review: Chesterbrook should consider developing a RTI review committee to evaluate the implementation process. The committee can work to determine strengths of the RTI implementation as well as areas that need modification.

5. Follow-Up Research: I would recommend a follow up study since the implementation of RTI took place during the 2016-2017 school year, and the interviews took place during the spring of 2019. This would provide an updated look of how RTI has progressed over the past few years.

Reflection

Reflecting on my research has allowed me to consider additional areas that might help to support any future researchers looking to replicate this study or follow a similar process. First, I would consider interviewing an elementary school that has recently gone through RTI implementation as opposed to several years prior to the study taking place. As mentioned in the Chapter 1, Limitations section, participants were asked to recollect information from the 2015-2016 year which was three years prior to the study taking place. Given that interview data were self-reported, this could have led to incomplete recollections of experiences and facts.
Secondly, I would have attempted to speak with additional staff members both at Chesterbrook and the county level. Tina was the only county wide staff member I spoke with as I only asked her for school recommendations, as opposed to other district wide personnel recommendations. There might have been additional staff members who sat in on committees or were involved in the process that could have provided additional insight into RTI implementation across the county. At the school level, the principal and assistant principal recommended individuals who were very involved in the implementation process. However, additional insight might have been provided by staff members who participated in the implementation but were not directly involved in the implementation process. It might have offered an alternative perspective to that of one immersed in the implementation.

Finally, as a practitioner, it is my responsibility to bring my expertise from this study forward to Holloway Public Schools. It would be my recommendation to not only share the results from the study, but also work with individuals within HPS to create an action plan for how to move forward with Response to Intervention. The results seen at this individual school site will be a support to other schools in developing and implementing a more flexible, fluid approach to implementation.

**Recommendations for Further Study**

This study could be replicated at an elementary school that is implementing RTI or used to support action research. This study has ascertained several areas that would warrant another study in a similar setting, including the importance of RTI Model Selection and use of Universal Screeners and other data to inform groupings and interventions. It may be useful to complete a follow-up study of Chesterbrook Elementary School to determine how their RTI model has developed and grown since 2016-2017. It may also be meaningful to complete a similar study with a school that has a comparable background as Chesterbrook to compare their implementation methods. It could also be
of interest to research how schools tailor their RTI implementation to help meet the unique needs of all students at their school. More research continues to be needed in order to have a better understanding of how schools implement RTI, utilize data for decision making, and how progress is monitored.

**Conclusions**

Chesterbrook combined several elements of Response to Intervention which created their own version of a hybrid RTI model that utilized components from both the standard protocol model and the problem-solving model. Universal screeners were utilized several times throughout the year for both reading and math, however the reading universal screeners were utilized to help identify student needs, while Chesterbrook relied less on the math data. After the staff identified student needs, they were grouped homogeneously where they accessed interventions or enrichment during Chesterbrook’s Cougar Block.

As students were identified as needing support, they accessed the tiers of support. The teachers worked to support the students through targeted re-teaching strategies to support weak concepts and skills. Students were able to access support not only during Chesterbrook’s intervention block, but also before or after school depending on their needs. The school teams also made sure to stay in constant communication with parents, and all school staff as well as parents had the option to refer to IAT at any point in time. If students did not make adequate progress, they were provided with access to Tier II and Tier III interventions. The school teams developed and implemented specific interventions and monitored student progress, varying time and intensity if students did not make expected progress. If the student did not make adequate progress after targeted intervention, the school team moved forward with a referral to Student Study.
Chesterbrook utilized a unique approach when implementing RTI, which worked to their benefit. While the literature suggests that the lack of consensus on implementation is a drawback, Chesterbrook utilized the flexibility to their advantage, and created a system that worked for their school and student population. What is best for students was always at the forefront of their decision-making procedures, and ultimately Chesterbrook crafted an implementation system that worked to target the needs of each individual student in order to work toward ensuring that all students were able to access the general education curriculum successfully.
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Appendix A: School District Research Application

Public Schools

Research Study Application

Overview

Public Schools recognizes that well-designed research and evaluation studies can provide a basis for major curriculum and instructional improvements. As a result, during any given academic school year, numerous studies - both internal and external - are being planned and conducted throughout the school system.

As a large, innovative school district, receives many more requests to conduct research than the school district can accommodate. Thus, a set of procedures has been established to coordinate the research conducted in.

This application packet outlines the process to seek approval for conducting research in Public Schools. The research application review process is designed to accomplish the following goals:

- Protect students and staff from excessive data collection demands, thereby protecting instructional time
- Ensure that the proposed research does not violate laws and policies governing student privacy
- Assess the quality of the proposed research and its potential to improve educational practices
- Ensure that the research does not replicate or interfere with research and evaluation studies already being conducted in or the state-mandated testing schedule

Research and Evaluation Studies Requiring Approval

In general, any request to collect data from or about students, parents, or staff requires approval. Exceptions include testing and assessment initiatives mandated by the state as well as program evaluations, assessments, and research studies that are prescribed by the School Board.

Review Criteria

Each research or evaluation project request will be considered on its individual merits. The approval decision will consider the following criteria:

- Clarity of the study’s purpose(s), objectives, and expected outcomes
- Soundness of the study design
- Potential value of the study for
- Inherent value of the study, if it is pure research
- Probable effect on students, teachers, principals, parents, and community, as appropriate (e.g., time required of students, time required of teachers, resources required, etc.)
- Relative inconvenience imposed by the study
- Processes ensuring the protection of students, teachers, principals, or parents from invasion of privacy, exploitation, undue burden, or danger of stigma
- Guarantee of anonymity where desirable
- Guarantee that parents shall be informed of research projects in which their children are participating when the project is not a part of the regular school curriculum

During the review process, priority will be given to studies that (1) directly relate to instructional or educational practice, (2) address the needs of (3) already have obtained IRB approval, and (4) meet advance degree thesis or dissertation requirements for graduate students who are employed by and who have received faculty/review committee approval.
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Past review cycles have typically denied studies that:

- encompass data collection activities that are a requirement for a post-secondary class project
- require large amounts of teacher and/or student time or loss of instructional time
- include data requests for personal information about students or their families
- meet master’s degree thesis requirements for graduate students not employed by APS

Application Process
Complete and submit an Application for Approval of Research Project cover sheet (appendix A) along with the required supporting documentation listed below. Once the forms and supporting material have been completed, submit via e-mail or regular mail to:

Research Review Committee
Office of Planning and Evaluation
Arlington Public Schools

Application Deadlines
Requests are reviewed on a semi-annual basis. Applications should be submitted in accordance with the deadlines stated below.

- **June 30th** for research that is to begin during the fall semester (September – December)
- **November 15th** for research that is to begin during the spring semester (January – June)

Review Process
Each request is reviewed by a panel of three to six APS staff members knowledgeable about educational research processes, instructional goals, curriculum/subject area instructional practices, and school-based administration. The review panel confers shortly after each submission deadline. Applicants are notified in writing about the acceptance or denial of their request prior to the start of the following semester. In some cases, a request may be accepted conditionally dependent on certain stipulations or revisions.
**Application Requirements**

Applications for approval of research projects must include the following six required items, and may include one optional item:

1. **Completed Cover Sheet (appendix A)**

2. **Study Description (appendix B)**
   
   Provide a written description of the proposed study. The description should follow the Study Description Outline in appendix B and should address all items listed in the outline.

3. **Verification of IRB approval**
   
   If IRB approval has not been obtained by the research application deadline, proof of an IRB application may be submitted. Applications may be approved on the condition that final IRB approval be submitted prior to the start of the study in APS.

4. **Abstract of the Proposed Study**
   
   Provide an abstract of the proposed study that describes the study in layman’s terms. The abstract should be approximately one page in length, and should cover the time frame for the study, including the start date and end date; and a description of the groups of staff and/or students who will be invited to participate in the research.

5. **Study Description for Website (appendix C)**
   
   Provide a brief description of the study, which will be posted to the Approved Research page upon approval of the study. The description will include the title of the study, the invited participants, and the methodology.

6. **Written Confirmation of Authenticity – Dr. Glenn is completing this.**
   
   Provide a letter of authenticity from the college, university, or organization with whom the researcher is associated.

7. **(Optional) Letter of Support from APS staff**
   
   In cases where an applicant has communicated with APS staff about their research and the staff member wishes to express support for the application, an optional letter of support may be submitted.

   If the applicant is employed by APS Public Schools and wishes to conduct research at their own work site, a letter of support from the principal or department head should be submitted.

A copy of the documents requested above should be submitted to:

Research Review Committee  
Office of Planning and Evaluation  

[Redacted Address]

If the application is approved:
• Planning and Evaluation will post the Study Description and the Abstract of the Proposed Study on the Approved Research web page. All subsequent communication from the researcher to invited study participants or to other staff must note the approval and provide a link to the webpage.

• A copy of any resulting publications should be provided to the Office of Planning and Evaluation.
Appendix B: Application for Approval of Research Project

**PUBLIC SCHOOLS**

Application for Approval of Research Project

Cover Sheet

<table>
<thead>
<tr>
<th>Title of Study:</th>
<th>Response to Intervention: A Case Study documenting one Elementary School's successful implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Applicant:</td>
<td>Elizabeth Rowden</td>
</tr>
<tr>
<td>Address:</td>
<td>3029 Federal Hill Drive Falls Church VA 22044</td>
</tr>
<tr>
<td>Telephone Number:</td>
<td>703-228-2109</td>
</tr>
<tr>
<td>Name and Title of Person(s) Responsible for the Conduct of the Study:</td>
<td>William J. Glenn, J.D., Ph.D. Associate Professor, SOE</td>
</tr>
<tr>
<td>Number of Students Involved in the Study:</td>
<td>N/A</td>
</tr>
</tbody>
</table>
| Grade Levels Involved in the Study: | N/A | Number of Schools Involved in the Study: | ● 1 elementary site  
● 1 department in Central Office |
| Are you a member of staff? | Yes - Positions held:  
● Teacher (ES)  
● Assistant Principal (MS, HS)  
● Specialist (DTL) | If you are submitting a letter of support from an staff member, please provide the staff member’s name: |

### Participants for Qualitative Research Study

<table>
<thead>
<tr>
<th>Elementary Site #1</th>
<th>Central Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>RTI Supervisor</td>
</tr>
<tr>
<td>Assistant Principal</td>
<td></td>
</tr>
<tr>
<td>Teachers Recommended by Administrative Team (5-6):</td>
<td></td>
</tr>
</tbody>
</table>
Recommendations could include reading specialist, math coach, Instructional Lead Teacher, special education teacher, and general education teacher.

**STUDY DESCRIPTION OUTLINE**

I. **Statement of the Problem**

Response to Intervention (RTI) is a multitiered system of support that helps to ensure that students are provided with the time and support that is necessary for high levels of learning (Buffum, Mattos, & Malone, 2018). RTI is a framework that provides guidance on providing early identification and intervention supports to students in need. The research used within my literature review proposes three common elements in RTI programs. The three components are as follows: 1) the implementation of high-quality scientifically validated, research-based interventions with fidelity, 2) monitoring the progress and performance of students, and 3) data-driven decision making.

Schools possess options regarding the implementation of RTI as well as how they monitor and utilize data, so variability arises due to the different ways in which schools implement RTI. While RTI successes are notable, the research suggests that consistency of implementation across settings is lacking.

A study completed by Shepherd and Salembier (2011) states that there is no consensus on a single model of implementation. Mastropieri and Scruggs (2006) note that at the present time, RTI does not have clear requirements, and that the teacher's role in RTI is disparate and open to interpretation. Due to this ambiguity, RTI presents significant challenges for schools that are attempting to implement the model with fidelity.

Implementing RTI with fidelity, or in the manner intended is crucial to its success. School districts can work to ensure fidelity using a variety of methods. The following are some of the issues with implementing RTI with fidelity in schools:

A. Implementing interventions with fidelity helps to increase intervention effectiveness, however more research needs to be done to identify practices such as progress monitoring and universal screens, which help to ensure fidelity.

B. Universal screening is essential to identifying students who are at-risk and ensuring that they receive access to intervention supports to address academic or behavioral weaknesses. Additional research may provide schools and school districts with a way to ensure that the appropriate tools are being used to accurately identify at-risk students.

C. There are many ways in which student progress may be monitored, and school districts need additional support in identifying methods for monitoring student progress as well as accessing universal screeners that are appropriate for their student population.

RTI has evolved from a method of identifying students with Specific Learning Disabilities, to a potential means of achieving success for all students. Research has proven that RTI can be successful. In order to further validate this method, more research needs to be conducted in order to demonstrate effective implementation. Areas of focus include looking at how schools utilize data in order to monitor student
Successful RTI Implementation

progress and determine movement between tiers, how universal screeners are utilized, and recommendations for successful implementation.

Additional research should produce clearer guidelines and recommendations for successful implementation and help to address many of the criticisms of RTI. As more research is compiled that supports RTI, we can look to fully utilize RTI and embrace it as a model that seeks to support the learning and growth of all students.

A. Purpose – State clearly and briefly exactly what you are trying to determine.
   1. The three essential components of RTI include: (1) fidelity of scientifically validated, research-based interventions, (2) data-based decision making, and (3) progress monitoring system. The purpose of this study is to examine and explain how one elementary school with a high quality RTI program implemented Response to Intervention while keeping all three essential components in consideration.

B. Justification
   1. Tell why you feel this problem is one of significance.
      Given that RTI is a framework that does not provide school systems and individual schools with specific implementation guidelines, there is often significant variability in how RTI is implemented at individual sites within a school division.
   2. State the potential worth of the study to the Public Schools and other relevant audiences.
      The RTI Qualitative Research Study would benefit Public Schools (APS), and more specifically one elementary site as well as the RTI Office within the Department of Teaching and Learning. Although APS is completing an evaluation of services for students with special needs in Fall 2018, the evaluation is focusing on systemwide processes, which will ultimately result in recommendations for Public Schools as a whole.

   recommended a subject elementary school that has implemented RTI well, which will allow me to delve deeper into what the selected school did to implement RTI successfully. Given that my qualitative research will focus on one specific site, I will dive deep into the school, and provide them with relevant feedback regarding RTI implementation. Clear recommendations for successfully implementation will be provided, which will help support more consistent implementation and better support the growth and learning of all students within Public Schools. I will also be able to confirm practices that are strong, as well as provide additional feedback opportunities for growth. Given that the ultimate goal is student success, any information that can help to strengthen the framework will be beneficial. The RTI Office will be able to utilize the data in order to create additional processes that better support systematization of RTI across the district. Another benefit of this data is that it could lead to the creation of targeted professional learning dependent on findings. If there is a need that we were not aware of, it will allow the schools with the support of the RTI Office to create more individualized professional learning opportunities that will help support RTI implementation.
Other considerations include the Evaluation of services for students with special needs. Within this evaluation, there are four questions that focus on CLT work and RTI processes. I will work with [Redacted] to ensure that I am focusing on a different school site and individuals than were used in the focus groups and interviews for the [Redacted] Evaluation. I will also work with [Redacted] and the Office of Assessment when I begin scheduling my interviews, to ensure that individuals are not overburdened with multiple requests for interviews.

C. Hypothesis – Research Questions to be answered.

1. How did the subject elementary schools implement RTI?
   A. How did the school site utilize data?
   B. How was progress monitored at the subject elementary school?
   C. What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes?

II. Methodology

A. Sampling – Identify the population from which the sample will be drawn and how many subjects will be included in the sample. Give these numbers in terms of students, classes, grades, teachers, and/or schools to be involved. Describe the process by which the sample will be drawn.

1. After obtaining consent, I will interview [Redacted], Supervisor of RTI within the Department of Teaching and Learning. Given that she has a recommended school site, once the site is approved, I will reach out to the administrators at the school site in order to obtain consent. Along with interviewing the school-based administrators, I will also ask that they recommend several school staff members who were involved throughout the RTI implementation process and could be interviewed for my research study. Once identified, I will contact the 5-6 recommended individuals and after obtaining consent, proceed with the individual interviews. A total of 8-9 individuals will be interviewed, including one Central Office Supervisor, with the remainder of participants being selected from one school site.

B. Collection of Data – Describe the data to be collected. Identify type(s) of data collection procedures (e.g., standardized test, questionnaire, observation, etc.). Provide information on the validity and reliability of instruments and amount of time required by subjects in completing any instruments. Attach a copy of any surveys, interview, or observation schedules.

1. Prior to conducting interviews, I will complete two separate field test interviews to help better prepare for the interviews, as well as to anticipate any challenges that may arise during the interview process. Each interview will be recorded using two recording devices. After the interviews, I will transcribe the interviews and provide each participant with an opportunity to member check their transcript and make any changes or suggestions. An interview protocol will be utilized for all interview participants. The protocols will be slightly different, dependent on position. Please see the appendix documents attached for the interview protocols. Please note: these could change slightly after the Prospectus Exam and/or field test interviews.
2. Data regarding RTI will be collected from [redacted] and the selected school site. Data collected will include RTI manuals, materials from planning committees, how the RTI block was included into the daily schedule, information shared with the community (i.e., letters, memoranda, powerpoints, CLT minutes, progress monitoring tools, interventions utilized, and anything else that will aid in my research).

3. All interviews will be less than one hour in length. The document review protocol (Merriam, 1988) was utilized by Keith Collins (2014) in his dissertation. In regard to dependability, I will utilize multiple data sources and compare my findings with the research in an effort to show that the results from my study are consistent and dependable. The Document Analysis Protocol that I plan to use was proven successful when utilized by Collins (2014). This helps to add to the dependability as well. Finally, I will also ask a cohort member at Virginia Tech to examine my data collection and data analysis process, as well as review my study results. Asking a cohort member to perform an inquiry audit to confirm accuracy of my findings will help to demonstrate dependability.

4. Please see attached documents that will be in the Appendix of my study.

C. Analysis of Data – Describe methods to be used in analyzing data.

1. Throughout the interview and data collection process, a lot of data will be gathered. In order to better manage this process, I will use the document review protocol (Merriam, 1988) as well as following a coding system similar to the one utilized in Collins (2014) when reviewing data. The color coding method will help to better organize text into categories. The categories align with the three essential components of RTI which include: (1) fidelity of scientifically validated, research-based interventions, (2) data-based decision making, and (3) progress monitoring system (Fuchs & Fuchs, 2001; Buffum, A., Mattos, M., & Weber, C., 2009). The color codes will be as follows: blue will denote progress monitoring, yellow will denote data-based decisions, purple will denote any documentation regarding fidelity, pink will denote interventions, and green will be utilized if anything outside of these categories is discussed. If a document pertains to more than one category, multiple codes may be used to represent this.

After I complete a thorough review of all county and school-based documents, including State School Report Card Data and Professional Learning Opportunities around RTI, I will then begin the process of conducting interviews, beginning with the RTI Coordinator, Principal, and then all of the recommended staff members at Chesterbrook. I will plan to ask questions surrounding their overall understanding and knowledge of RTI, RTI Fundamentals and Implementation, Interventions, as well as a few additional questions regarding benefits of RTI and additional support needed. I will code all interviews in the same manner utilized during the document analysis to ensure consistency, as well as support triangulation.

2. Documents from [redacted] and the selected school site will be evaluated using the document analysis protocol that Collins (2014) utilized (Merriam, 1988, p. 121-122)
   A. What is the history of the document?
   B. How did it come into my hands?
C. What guarantee is there that it is what it pretends to be?
D. Is the document complete, as originally constructed?
E. Has it been tampered with or edited?
F. If the document is genuine, under what circumstances and for what purposes was it produced?
G. Who was/is the author?
H. What was he trying to accomplish? For whom was the document intended?
I. What were the maker’s sources of information? Does the document represent an eyewitness account, a secondhand account, a reconstruction of an event long prior to the writing, an interpretation?
J. What was or is the maker’s bias?
K. To what extent was the writer likely to want to tell the truth?
L. Do other documents exist that might shed additional light on the same story, event, project, program, context? If so, are they available, accessible? Who holds them

III. Resources

A. Personnel – Identify the person(s) who will conduct this study.
   1. Elizabeth Rowden – Specialist, Professional Learning Office, Department of Teaching and Learning

B. Time – Provide a time schedule outlining when data collection and analysis will occur. Estimate the amount of time required for each phase of the study. Also specify the time required of students, teachers, other staff and parents who are involved in the study.
   1. January 2019 – February 2019
      A. Obtain consent for conducting interviews with RTI Coordinator and administrators at selected school site.
      B. Interview Coordinator of RTI at Central Office
         1. Collect any documentation regarding RTI including but not limited to: Five-year plan, Implementation, interventions utilized within intervention planning documents, and handouts/materials shared with the School Board, Executive Leadership Team, Principals, Assistant Principals, Teachers, etc.
      C. Interview Principal and Assistant Principal at selected school site
         1. Collect any documents regarding RTI including but not limited to: Implementation, interventions utilized, intervention planning documents, team minutes, RTI manual, documents shared with parents, information regarding schedule creation, etc.
         2. Receive recommendations for interviewing school staff
         3. Contact recommended participants by phone and email. After contact is established, send participants the interview protocol and a letter detailing my research.
         4. Obtain consent for conducting interviews with school staff.
         5. Conduct interviews.
   2. March 2019 - June 2019
      A. Qualitative Data Analysis
C. Facilities – List any facilities that you have or that are required for the study.
   1. Within the selected elementary school site, I will need a small space to conduct a maximum of 7-8 one-hour interviews and review any documentation pertinent to RTI.

IV. Budget

Provide an estimate of the costs required to conduct this study. Indicate the funding sources that will be used for the required funding.

A. There are no costs associated with conducting this study. No funding sources will be needed.
Please provide a brief description of the proposed study, which upon approval will be posted to the Approved Research page of the APS website, along with the Abstract of the Proposed Study.

<table>
<thead>
<tr>
<th>Name of Study:</th>
<th>Response to Intervention: A Case Study documenting one Elementary School’s successful implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invited Participants:</td>
<td>The RTI Supervisor as well as Elementary School Administrators and Staff Members involved in the RTI implementation efforts at a selected school site.</td>
</tr>
<tr>
<td>Methodology:</td>
<td>Qualitative Study involving interviews and review of RTI documents utilized within the county and at the specified school site.</td>
</tr>
</tbody>
</table>
Successful RTI Implementation

Appendix A: School District Research Application
Abstract of the Proposed Study

Response to Intervention: A Case Study documenting one Elementary School’s successful implementation

The use of Response to Intervention (RTI) has been on the rise in recent years, as educators look to find ways in which to eliminate the nation’s achievement gap. RTI is a multi-tiered system of support for students with academic and behavioral needs. Interventions that increase in intensity are provided to identified students, and progress is monitored throughout. In order for RTI to be effective, students must have access to high-quality instruction as well as frequent progress monitoring through universal screeners or an assessment system in order to determine student achievement. Use of this assessment system helps to determine the intensity of intervention required to meet individual student needs as part of the multi-tiered approach (NASDSE, 2006). Although RTI has not been around for a long time, it has transformed the process of teaching and learning.

The three essential components of RTI include: (1) fidelity of scientifically validated, research-based interventions, (2) data-based decision making, and (3) progress monitoring system. The purpose of this study is to examine and explain how one elementary school with a high quality RTI program implemented Response to Intervention while keeping all three essential components in consideration. In order to get a better understanding of how the site executes the RTI process, I will conduct a qualitative case study and utilize qualitative data as I look to answer a primary research question and three sub-questions related to the research.

1) How did the subject elementary school implement RTI?
   a) What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes?
   b) How did the school site utilize data?
   c) How was progress monitored at the subject elementary school?

Research for my study will begin in January 2019. I will obtain consent prior to interviewing any participants for my study. The Supervisor of RTI will be interviewed, as well as the administrators at the selected elementary school site. The administrators will recommend staff members who played an integral role in the implementation of RTI in their building. These might include the reading specialist, math coach, instructional lead teacher and other leadership team members, a special education teacher and a general education teacher. The interviews will each take less than one hour to complete. Simultaneously, I will
also be collecting data regarding RTI implementation. Types of documents collected will include but are not limited to Implementation, interventions utilized, intervention planning documents, team minutes, RTI manual, documents shared with parents, and information regarding schedule creation. The data collection and interview process should be complete by March 2019.
Appendix A: School District Research Application

Written Confirmation of Authenticity

Division Research Screening Committee:

I am writing this letter in support of the application Elizabeth Rowden to conduct research in the [Redacted] Public Schools. I am the dissertation chair for Ms. Rowden. Ms. Rowden has received instruction in both quantitative and qualitative research methods. I taught two of the research methods classes taken by Ms. Rowden and can assure you that she is well prepared to conduct the study, both in terms of being a competence in the proposed methods and in terms of the ethics of research.

The application by Ms. Rowden involves research for her dissertation at Virginia Tech. She serves as a Specialist in the Department of Teaching and Learning at [Redacted], where she works with the [Redacted] mentoring program, supporting and coaching new educators, and supporting professional learning throughout the county. She is very interested in ensuring that all students receive a high quality education, with an emphasis on reaching students who are struggling in the regular classroom environment. Therefore, in addition to possessing the requisite research skills to conduct the study, she also knows the substance of the topic of RTI very well, both through her academic studies and her professional experiences.

I have full confidence that Ms. Rowden will conduct a high quality, ethical research study. She will receive guidance from me and from the rest of her dissertation committee with regard to this project. I hope that you will approve her application. I would be happy to discuss the matter with you if you have any questions.

Sincerely,

William J. Glenn, J.D., Ph.D.
Associate Professor, School of Education
Virginia Tech
Appendix B: Authorization Letters
IRB Authorization Letter
MEMORANDUM

DATE: January 2, 2019

TO: William Joseph Glenn, Elizabeth Szydlo Rowden

FROM: Virginia Tech Institutional Review Board (FWA0000572, expires January 29, 2021)

PROTOCOL TITLE: Response to Intervention: A Case Study documenting one elementary school's successful implementation

IRB NUMBER: 18-1099

Dear Investigator(s):

RE: Protocol Submission for WIRB Review

The Virginia Tech Institutional Review Board (IRB) office screened this study and determined that it is ready for WIRB review.

Please download the "Instructions for the PI to Transfer the VT IRB Protocol to WIRB":

Please go to https://connexus.wcgclinical.com to complete the protocol submission process to the WIRB.

ATTENTION:

* William Joseph Glenn MUST BE LISTED AS THE PI ON THE WIRE SUBMISSION.

* All references to the VT IRB (including phone number and email address) MUST be removed from all study documents and replaced with Western IRB - (866) 532-4785, help@wirb.com.

*Special instructions, if any, are included on the top of the next page.
January 8, 2019

William Joseph Glenn, PhD, JD
Virginia Tech
7054 Haycock Road
Falls Church, VA  22043

Dear Dr. Glenn:

SUBJECT:  IRB EXEMPTION—REGULATORY OPINION
Protocol Title:  Response to Intervention: A Case Study documenting one elementary school’s successful implementation
Investigator:  William Glenn, PhD, JD
IRB Protocol No.:  18-1099

This letter is in response to your request to Western Institutional Review Board (WIRB) for an exemption determination for the above-referenced study.  WIRB’s IRB Affairs Department reviewed the exemption criteria under 45 CFR §46.101(b)(1):

(b) Unless otherwise required by department or agency heads, research activities in which the only involvement of human subjects will be in one or more of the following categories are exempt from this policy:

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

We believe that this project fits the above exemption criteria because the purpose of the project is to interview elementary school staff to discuss their strategies for identifying students with learning disabilities and the tools and strategies used to achieve success for all students. The research will also evaluate the documents and tools used by the school staff.

This exemption determination can apply to multiple sites, but it does not apply to any institution that has an institutional policy of requiring an entity other than WIRB (such as an internal IRB) to make exemption determinations. WIRB cannot provide an exemption that overrides the jurisdiction of a local IRB or other institutional mechanism for determining exemptions. You are responsible for ensuring that each site to which this exemption applies can and will accept WIRB’s exemption decision.
Please note that any future changes to the project may affect its exempt status, and you may want to contact WIRB about the effect these changes may have on the exemption status before implementing them. WIRB does not impose an expiration date on its IRB exemption determinations.

If you have any questions, or if we can be of further assistance, please contact, Andrei Chertov PhD at (360) 252 2458, or e-mail RegulatoryAffairs@wirb.com.

AOC:jca
B1-Exemption-Glenn (01-08-2019)
cc: VA Tech, WIRB, Virginia Polytechnic Institute and State University
    WIRB Accounting
    WIRB Work Order #1-1145067-1
MEMORANDUM

DATE: March 24, 2019

TO: William Joseph Glenn, Elizabeth Szydlo Rowden
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)

PROTOCOL TITLE: Response to Intervention: A Case Study documenting one elementary school's successful implementation

IRB NUMBER: 18-1099

The Virginia Tech Institution Review Board (IRB), acknowledges the Amendment request for the above-mentioned research protocol.

This acknowledgement recognizes the item(s) identified in the Special Instructions section.

NOTE: Amendments that must be submitted to WIRB for review and approval include changes to funding, conflict of interest, ANY and ALL changes to study procedures and study documents. If your study received a Determination letter (qualified for Not Human Subjects or for an Exemption) please review the information at the end of your Determination Letter. If your study was approved by a Panel, WIRB provides guidance on making changes in their Guide for Researchers. Please refer to the section titled, Changes to Research / Additional Document Submissions in the following document:
Appendix C: Interview Protocols
Interview Protocols for Administrators and School Staff Members

Interviewee: ________________________________________________________

Date of Interview: ____________________________________________________

Research Questions:

1. How did the subject elementary school implement RTI?
   a. How did the school site utilize data?
   b. How was progress monitored at the subject elementary school?
   c. What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes?

Introduction
Thank you for taking the time to interview with me today. Given your background with Response to Intervention (RTI), I would like to interview you so that I can better understand how RTI was developed and implemented at _______ Elementary School. Throughout our interview, I will ask you questions that will better able me to understand how data is utilized, interventions utilized at your school, how progress is monitored, your involvement in the RTI process at _______ Elementary, and your observations surrounding RTI after helping to implement it.

If you are comfortable with what we will be speaking about today, we can begin the interview and I will begin recording your responses now. Start recording now.

Opening Questions

1. What is your background with Response to Intervention?
2. Why did your school implement RTI at the time you did?
3. What did the process of implementation look like at your school?
4. How did you support its implementation?

RTI Fundamentals, Implementation, and Progress Monitoring

1. How did _______ Elementary implement interventions that are high quality, research based?
2. How was fidelity of implementation ensured?
   a. Prompt: Can you define fidelity of implementation?
3. How did _______ Elementary monitor student academic progress and performance?
   a. Prompt: What factors do you consider when determining whether or not a student should move from:
Successful RTI Implementation

1. Tier One to Tier Two
2. Tier Two to Tier Three?
3. Different levels of intensity/duration

4. How did the school make data driven decisions utilizing RTI data?
   a. Prompt: What data are used when making decisions?

5. What universal screening tools were utilized within RTI at your school?

6. When students were identified as at-risk through a universal screener, how did your school begin implementing interventions?
   a. How was an intervention selected once a student was identified?
   b. Who selected the interventions for identified students?
   c. How was the length of time spent in an intervention determined?
   d. What or who helped to monitor the start and end dates for interventions?

Additional Information

1. What has been the biggest benefit since _______ Elementary implemented RTI?
2. What area do you feel your school needs more support in within RTI?
3. Is there anything additional you would like to add regarding the implementation of RTI, that was not discussed today?

Clarifying Questions:
Can you add any additional information regarding this?
Is there anything else you could add?
Can you provide me with any examples?

Conclusion
This concludes our interview. I appreciate you taking the time to share your experiences with me. If you have any questions, my contact information is on the consent form you signed at the beginning of this interview. Thank you again. Stop recording.

Transcription Review

• Yes, I would like to review the interview transcript from this session. I understand that I will have up to seven days to review the transcript from the date that I receive them. If I do not respond with edits within seven days, the researcher will assume that I do not want to make any changes to the transcript and they will begin the transcript analysis.

• No, I do not want the option to review the transcripts of this interview.
Interview Protocol for RTI Coordinator

Interviewee: ________________________________________________________

Date of Interview: ____________________________________________________

Research Questions:
1. How did the subject elementary school implement RTI?
   a. How did the school site utilize data?
   b. How was progress monitored at the subject elementary school?
   c. What evidence is there to suggest that RTI was implemented with fidelity as the research prescribes?

Introduction
Thank you for taking the time to interview with me today. Given your background with Response to Intervention (RTI), I would like to interview you so that I can better understand how RTI was developed and implemented at _______ Elementary School, as well as your experience with it from the county-wide level. Throughout our interview, I will ask you questions that will better able me to understand how data is utilized, interventions utilized at the school site and county, how progress is monitored, and your involvement in the RTI process at _______ Elementary.

If you are comfortable with what we will be speaking about today, we can begin the interview and I will begin recording your responses now. Start recording now.

Opening Questions

1. What is your background with Response to Intervention?
2. Why did the county implement RTI at the time they did?
3. What did the process of implementation look like across the county?
4. Why did _______ Elementary implement RTI at the time that they did?
5. How did you support its implementation at _______ Elementary and across the county?

RTI Fundamentals and Implementation

7. How does HPS ensure that the interventions implemented at _______ Elementary are high quality and research based? How is fidelity of implementation ensured?
8. How does HPS help to monitor student academic progress and performance at _______ Elementary School?
   a. Prompt: What factors do you consider when determining whether or not a student should move from:
Successful RTI Implementation

i. Tier One to Tier Two
   ii. Tier Two to Tier Three?
   iii. Different levels of intensity/duration

9. How does HPS support _______ Elementary School in making data driven decisions utilizing RTI data?
   a. What data is used when making decisions?

Interventions

1. What universal screening tools are utilized within RTI?
2. When students are identified as at-risk through a universal screener, how does HPS support schools in implementing interventions?
   a. How are interventions selected once a student was identified?
   b. Who selects the interventions?
   c. How is the length of time that should be spent in an intervention determined?
   d. What or who helps to monitor/determine the start and end dates for interventions?

Additional Information

6. What has been the biggest benefit since _______ Elementary implemented RTI?
7. Is there anything additional you would like to add regarding the implementation of RTI, that was not discussed today?

Clarifying Questions:
Can you add any additional information regarding this?
Is there anything else you could add?
Can you provide me with any examples?

Conclusion
This concludes our interview. I appreciate you taking the time to share your experiences with me. If you have any questions, my contact information is on the consent form you signed at the beginning of this interview. Thank you again. Stop recording.

Transcription Review

- Yes, I would like to review the interview transcript from this session. I understand that I will have up to seven days to review the transcript from the date that I receive them. If I do not respond with edits within seven days, the researcher will assume that I do not want to make any changes to the transcript and they will begin the transcript analysis.

- No, I do not want the option to review the transcripts of this interview.
Appendix D: 5 Year Framework for Response to Intervention

The Virginia Department of Education defines a Tiered System of Support as a framework and philosophy that provides resources and supports to help every student reach success in academics and behavior. It begins with systemic change at the division, school and classroom level that utilizes research-based, system-wide practices to provide a quick response to academic and behavioral needs. These practices include frequent progress monitoring that enable educators to make sound, data-based instructional decisions for students. The focus of RTI is to address the whole child and what supports he or she needs to be successful both academically and social emotionally. The RTI framework uses the data based decision model as part of the Professional Learning Communities (PLC), to analyze data, identify students who are in need of remediation or extension and create timely action plans. RTI is a system for meeting the needs of all students.

Below depicts thirteen overall long-term goals that will guide Public Schools toward full implementation of a tiered system of support for all students with an estimated time line.

<table>
<thead>
<tr>
<th>Long-Term Goals Overview</th>
<th>Estimated beginning point and duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All schools will have at least two 60 minutes timeframes a week for teachers and staff to meet in collaborative teams as a part of the PLC process.</td>
<td>Complete</td>
</tr>
<tr>
<td>2. All schools and central office will receive training on RTI.</td>
<td>Complete but will be ongoing</td>
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<tr>
<td>3. All schools will have a Tier 1 instructional framework in place with appropriate resources to differentiate for student needs.</td>
<td>In the implementation process (resource adoption will help this)</td>
</tr>
<tr>
<td>4. All schools will administer universal screening in reading and math.</td>
<td>Complete-on-going</td>
</tr>
<tr>
<td>5. All grade level/content teams will administer common formative assessments.</td>
<td>Complete-on-going</td>
</tr>
<tr>
<td>6. All schools will identify power standards and student friendly learning outcomes.</td>
<td>Complete</td>
</tr>
<tr>
<td>7. All grade level/content teams will analyze and respond to academic and behavioral data.</td>
<td>In the implementation process</td>
</tr>
<tr>
<td>8. All schools will have time during the school day to deliver intervention/extension for all students.</td>
<td>In the implementation process</td>
</tr>
<tr>
<td>9. All schools will monitor and document student progress for Tier 1, 2 and 3 in the RTI data system.</td>
<td>In planning phase</td>
</tr>
<tr>
<td>10. All schools will monitor and track student attendance and provide interventions for students who have problematic absenteeism.</td>
<td>Completed</td>
</tr>
<tr>
<td>11. All schools will have a Tier 1 core behavior framework in place to explicitly teach and recognize responsive and developmentally appropriate behavior expectations.</td>
<td>In the implementation process</td>
</tr>
<tr>
<td>12. All schools will identify and implement Tier 1, 2 and 3 behavior and social emotional interventions for students who need additional support.</td>
<td>In planning phase</td>
</tr>
<tr>
<td>13. All schools will involve parents/guardians in the RTI process.</td>
<td>In planning phase</td>
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</table>

Long-Term Goals with Strategies to Accomplish It

**All schools will have at least two 60 minutes timeframes a week for teachers and staff to meet in collaborative teams as a part of the PLC process.**

a) On-going training on the PLC process and data driven instruction offered at the school site and centrally. Instructional lead teachers will support school based training.

b) Every teacher will be part of a collaborative team as a part of the PLC process.

c) Each year grade level/content teams* will revisit their roles, responsibilities, norms, mission, vision, values and goals for the year.

*Grade level/Content teams include ESOL, SPED and gifted teachers. Participation of elective teachers will be determined by the school administrator. Additional staff such as counselors, social workers, bilingual resource assistants, minority achievement coordinators, SRO’s and other support staff should be invited to grade level/content team meeting as needs arise.

All schools and central office will receive training on RTI.
All schools will monitor and document student progress for Tier 1, 2, and 3 in the RTI data system.

**Successful RTI Implementation**

- **All schools will have a Tier 1 instructional framework in place with appropriate resources to differentiate for student needs.**
  - a) All administration will receive initial knowledge building training centered on collective reasonability, concentrated instruction, convergent assessment, and certain access.
  - b) School teams of 4-10 will receive training to begin planning for implantation.
  - c) School teams will build capacity through turn around training offered at their site for additional school staff.
  - d) All schools will have time during the school day to deliver intervention/extension for all students.
  - e) All grade level/content teams will analyze and respond to academic and behavioral data.
  - f) All schools will identify power standards and student friendly learning outcomes.
  - g) All schools will administer universal screening in reading and math.
  - h) All grade level/content teams will administer common formative assessments.
  - i) All schools will administer quarterly formative assessment developed by [blank] to determine which standards student have mastered and which standards students need additional support in.
  - j) Grade level/content teams will create their own common formative assessments to pre and posttest content information.
  - k) Team created common formative assessment will also include Power Standards once they are identified.
  - l) Intervention and extension opportunities will be provided to students based on assessment results.
  - m) All schools will identify power standards and student friendly learning outcomes.
    - a) Content offices will receive training on the process of Power Standards.
    - b) Content supervisors and specialists will train Lead teachers/Department chairs on identifying power standards to enable them to lead this work at the school.
    - c) At the beginning of each quarter grade level/content teams with the support of reading teachers, math coaches, ESOL and SPED leads, department chairs and other specialized staff will identify the Power Standards for that quarter.
    - d) Lead teachers/Department chairs will share back with the content office Power Standards identified at their school to ensure alignment across the district.
    - e) Each grade level/content team will collectively work to identify student learning targets for each standard such as “I can” or “I know” statements that students will use to monitor their own progress.
    - f) All grade level/content teams will analyze and respond to academic and behavioral data.
      - a) All grade level/content teams will meet to discuss universal screening results and other common formative and summative assessment results.
      - b) School leadership teams will analyze school wide trends, look at the progress of gap groups 1, 2, and 3 as well as grade level results.
      - c) Collaborative teams will identify students who need additional support or extension immediately after assessment, determine how to progress monitor student growth and who will be in charge of progress monitoring.
      - d) Central office staff will train schools on how to determine appropriate interventions and ways to provide extension to students who have mastered grade level expectations.
      - e) After student data is analyzed, teams will determine appropriate interventions/extensions, implement interventions/extensions, monitor progress.
      - f) Teams will use RTI monitoring system to document the assigned interventions, student progress, when changes need to be made.
  - n) All schools will have time during the school day to deliver intervention/extension for all students.
    - a) School leadership will receive training on creating a master schedule that includes time for intervention.
    - b) School leadership teams will design the master schedule to build in guaranteed time for students who need intervention or extension. The recommended amount of time is 30 minutes 4-5 times a week.
    - c) Grade/content teams will determine student needs and determine if any staff needs to be trained in additional interventions to be able to support the students.
    - d) Teachers will be trained on how to select appropriate intervention and monitor effectiveness of the interventions.
    - e) The Department of Instruction and Student Services will work together to identify areas that need additional researched-based academic or behavioral interventions needed in the county.
    - f) Teachers, administrators, and central office staff members will use the district wide RTI data system to monitor all intervention participation and student progress.
    - g) School administrators will conduct observations and walk-throughs to monitor intervention implementation and delegate staff to support intervention implementation as needed.
Successful RTI Implementation

| a) | A team of APS staff will identify and implement an RTI data system to document and monitor intervention data. |
| b) | As part of the PLC structure, collaborative teams will record interventions in the data system to document progress. |
| c) | All schools will use the RTI data system to document IAT meetings, decisions, and intervention plans (academic/behavior goal(s), responsible staff, duration, frequency, outcomes) for students who have been identified as needing additional support beyond what the collaborative team can implement or when previous supports have not been successful. |
| d) | Progress monitoring data will be entered into the RTI data system regularly (i.e. weekly, bi-weekly, monthly) based on the intensity of intervention. |
| e) | All staff will be informed and engage parent/families on intervention needs provided with regular updates on student progress. |
| f) | Schools will use collaborative team time and the Intervention Assistance Team (IAT) to collectively determine student needs, assign an intervention(s) and monitor intervention progress. |

**All schools will monitor and track student attendance and provide interventions for students who have problematic absenteeism.**

| a) | See Attendance Improvement Plan. |
| b) | All schools will have a Tier 1 core behavior framework in place to explicitly teach and recognize responsive and developmentally appropriate behavior expectations. |
| c) | All schools will have a school-wide vision for behavioral expectations and create responsive and developmentally appropriate behavioral expectations. Several stakeholders should be involved in this to include families, bilingual resource assistants, minority achievement coordinators, SRO and other relevant staff who can provide cultural implications and experiences. |
| d) | All schools will implement a school-wide behavioral framework. Examples can include Responsive Classrooms or Positive Behavioral Interventions and Supports (PBIS). |
| e) | School training will be provided to staff on the selected behavioral framework. |
| f) | All staff will teach, model and recognize behavioral expectations in multiple contexts. |
| g) | School leadership teams will ensure that all students have opportunities to build meaningful relationships at the school with adults and other students. |
| h) | Schools will work with the bilingual resource assistants, minority achievement coordinators, resource offices, extended day and other relevant staff of ensure behavioral and social emotional supports are meeting the diverse needs of student and families. |

**All schools will identify and implement Tier 1, 2 and 3 behavior and social emotional interventions for students who need additional support.**

| a) | All schools will monitor and track all office discipline referrals (ODR), attendance data, tardies, leaving class early, IAT referrals and suspensions to examine trends and areas of need. |
| b) | APS will provide training to appropriate staff on different Tier 2 and 3 interventions. |
| c) | Staff will receive training on how to select appropriate interventions to meet behavioral and social emotional needs and how to monitor progress. |
| d) | Schools will use collaborative team time and IAT time to identify students who need additional behavioral interventions. |
| e) | Schools will use the RTI Data System to document and monitor students receiving a behavioral intervention. |

**All schools will involve parents/guardians in the RTI process.**

| a) | APS will conduct parent sessions to inform parents about RTI and how they can become involved. Sessions may be recorded and posted on the APS webpage for parents to view at other times. |
| b) | APS will train IAT chairs or other designated staff to provide information at PTA meetings. |
| c) | APS will provide RTI pamphlets and relevant literature translated in other languages through a variety of ways (i.e. school offices, internet, parent conferences, advisory groups) |
| d) | APS will collaborate with parent groups, ACI committees, PRC, Parent Academy, PTAs and other school and family liaisons to share information and collect feedback around RTI. |
| e) | APS will provide a link to the RTI webpage on each school home web page. |
| f) | Parents will receive periodic surveys to provide feedback on the implementation of RTI. |
| g) | APS will work with staff to increase their knowledge of effective strategies to engage and build effective partnerships with families. |
Appendix E: HPS Intervention Protocol

Determining a Focus for Tier 2 and 3 Interventions

Is the student reading (accuracy, fluency, comprehension) and spelling at grade level based on the PALS?

- **Yes**
  - Continue with core instruction and monitor progress

- **No**
  - Determine if you need to administer an additional diagnostic assessments to determine area of focus for core instruction and intervention.

- **On the Bubble**
  - Consider using an additional diagnostic assessment to determine student needs.

*Any student who does not meet the summed score benchmark, a benchmark in a subtest or is on the bubble, the teacher(s) is expected to consider whether or not administering an additional diagnostic assessment is needed to inform appropriate instruction (see below for options).*

*For help and guidance with English Learners, click here.*
<table>
<thead>
<tr>
<th>Phonemic Awareness Area of focus (subskill)</th>
<th>Strategy/Intervention to try:</th>
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</thead>
<tbody>
<tr>
<td>Is the student having difficulties with...</td>
<td>Strategies/ Lesson Ideas:</td>
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<tr>
<td></td>
<td>Research-Based Program Fact Sheet:</td>
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<td>3-6 Week Intervention Outline and Resources</td>
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<tr>
<td><strong>BLENDING/SEGMENTING</strong></td>
<td><strong>PALS Lessons:</strong></td>
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<td><em>Be the Sound</em></td>
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<td><em>Old MacDonald</em></td>
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<td><em>Picture Puzzles</em></td>
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<td><em>Robot Talk</em></td>
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<td><em>Slip and Slide</em></td>
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<td><em>Wordsplash</em></td>
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<td><em>The Sound in the Words</em></td>
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<td><em>Turtle Talk</em></td>
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<td><strong>Florida Center for Reading Research Lessons:</strong></td>
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<td><em>Onset/Rime:</em></td>
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<td><em>Quick Pick</em></td>
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<td><em>Rime House</em></td>
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<td><em>Sound Detective</em></td>
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<td><strong>K-1:</strong></td>
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<td><em>Name That Sound</em></td>
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<td><em>Phoneme Closed Sort</em></td>
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<td><em>Say &amp; Slide Phonemes</em></td>
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<td><em>Segment Those Words</em></td>
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<td><em>Sound Spin</em></td>
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<td><em>The Sound Game</em></td>
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<td><em>Picture Slide</em></td>
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<td><em>Treasure Box</em></td>
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<td><strong>2-3:</strong></td>
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<td><em>Phoneme Counting Sort</em></td>
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<td><em>The Phoneme Game</em></td>
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<td><em>Phoneme Challenge</em></td>
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<td><em>What’s My Word?</em></td>
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<td><em>Break and Make</em></td>
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<td><em>Split and Say</em></td>
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</table>

- **Orton-Gillingham**
- **Spell Read**
- **Phono-Graphix**
- **My Virtual Reading Coach**
- **Blendine/Segmenting**
<table>
<thead>
<tr>
<th>Phonemic Awareness Area of focus (subskill)</th>
<th>Strategy/Intervention to try:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strategies/ Lesson Ideas:</td>
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<td>Words Their Way</td>
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<td>Supplemental Games</td>
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<td>PALS Lessons:</td>
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<td>Change That Vowel</td>
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<td>Guess My Letter</td>
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<td>Hopscotch for Sounds</td>
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<td>Letter Hunt</td>
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<td>Letter Sound</td>
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<td>Sand Tray</td>
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<td>Mirrors, Pipes</td>
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<td>and Clay, Oh My!</td>
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<td>Monster Puppets</td>
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<td>Photo line</td>
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<td>Roll a letter, Pick a Sound</td>
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<td>Simon Says Sounds</td>
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<td>Sort by Sound</td>
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<td>Sound Switch</td>
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<td>Word Line</td>
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<td>Vowel Sound Uno</td>
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</table>
Successful RTI Implementation

Appendix F: Chesterbrook Schedule including Cougar Block Times
## Unwrapping Essential Standard 3.5

### What is it we expect students to learn? SOL 3.5

<table>
<thead>
<tr>
<th>Grade: 3</th>
<th>Subject: Math</th>
<th>Quarter: 2 Unit 7</th>
<th>Team Members</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of Standard:</strong></td>
<td>Example of Rigor: What does proficient student work look like? Provide an example and/or description.</td>
<td>Prerequisite Skills: What prior knowledge, skills, and/or vocabulary are needed for a student to master this standard?</td>
<td>Strategies: What strategies will be taught to help students learn this standard?</td>
</tr>
<tr>
<td>3.5 The student will recall multiplication facts and related division facts for factors 0-5, 9, 10. *This is a deep standard. This exclusion targets the goals for 2nd Q.</td>
<td>Example: What goes into the box to make this problem correct?</td>
<td>Repeated Addition</td>
<td>1. Repeated addition</td>
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<tr>
<td></td>
<td>5 X □ = 35</td>
<td>Skip Counting</td>
<td>2. Skip counting (patterns on a 100's chart)</td>
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<td>Putting things into equal groups: You have 24 books. What are all the ways these books can be arranged if they all have an equal amount?</td>
<td>Subtraction</td>
<td>3. Number line</td>
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<td>Which equation would help you solve 32/5?</td>
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<td>5. Arranging things into equal groups (equal shares drawing x or ( \div ))</td>
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<td>6. Array models</td>
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Appendix I: My Multiplication and Division Learning Targets for SOL 3.5

<p>| | |</p>
<table>
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<td><strong>SOL 3.5</strong></td>
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</tr>
<tr>
<td><strong>My Multiplication and Division Learning Targets</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>I can represent <strong>multiplication</strong> using <strong>repeated addition</strong> and solve.</td>
</tr>
<tr>
<td>1a</td>
<td>I can use ( \times ) to write a multiplication equation.</td>
</tr>
<tr>
<td>2</td>
<td>I can represent <strong>multiplication</strong> using <strong>skip counting</strong> and solve.</td>
</tr>
<tr>
<td>2a</td>
<td>In <strong>multiplication</strong>, I can identify which number is a <strong>factor</strong> and which number is the <strong>product</strong> or <strong>multiple</strong>.</td>
</tr>
<tr>
<td>3</td>
<td>I can represent <strong>multiplication</strong> using a <strong>number line</strong> and solve.</td>
</tr>
<tr>
<td>4</td>
<td>I can represent <strong>multiplication</strong> using <strong>equal groups of pictures or objects</strong> and solve.</td>
</tr>
<tr>
<td>5</td>
<td>I can represent <strong>division</strong> by making <strong>equal groups of pictures or objects</strong>.</td>
</tr>
<tr>
<td>5a</td>
<td>I can use ( \div ), ( \sqrt{_} ), or ( / ) to write a division equation.</td>
</tr>
<tr>
<td>6</td>
<td>I understand that <strong>multiplication</strong> (combining) and <strong>division</strong> (separating) are <strong>connected</strong>, or <strong>related</strong>.</td>
</tr>
<tr>
<td>7</td>
<td>I can represent multiplication using an <strong>array model</strong>.</td>
</tr>
<tr>
<td>8</td>
<td>I can represent multiplication using rows and columns.</td>
</tr>
</tbody>
</table>
### Summary of Data/Targeted Interventions

After creating the instructional learning targets for SOL 3.5 (multiplication), the third grade team created an instructional map that included the number of days to spend on each learning target, a day to provide a common formative assessment, and a day to meet to plan intervention based on the data. Teachers would look at their data from the assessments and pinpoint the students who did not meet mastery of the targeted skills. Any student who did not score 100% on the assessment was considered not meeting mastery. We used a spreadsheet that listed the targets, a room placement, and a teacher to teach the designated skill. Teachers would place the students’ names into the spreadsheet under the targeted skill their students needed intervention on. When students missed more than one targeted skill on an assessment, it was up to the teacher’s judgment to decide where to place that student during intervention time. Intervention instruction was provided by the third grade teachers and the math coach. Occassionally, other adults were needed for management of non-intervention groups. All 3rd grade students not in an intervention group participated in enrichment activities related to multiplication such as math dice and Fundamental math games. Interventions took place once a week for 30 minutes. Interventions occured during an already designated 45 minute intervention period in the master schedule outside of math instructional time. Samples of groupings/activities are shown below.

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<tr>
<th>Week 1/8/2016</th>
<th>Location</th>
<th>T2 Sklp counting</th>
<th>T1 Repeated</th>
<th>T3 (# line)</th>
<th>Enrichment.1</th>
<th>Enrichment.2</th>
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<tr>
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<td>T1-3</td>
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<table>
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<tr>
<th>Week 2/5/2016</th>
<th>Location</th>
<th>T4 X Equal Groups</th>
<th>T5 / Equal Groups</th>
<th>T4 and T5</th>
<th>T6</th>
<th>Enrichment.1</th>
<th>Enrichment.2</th>
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<tr>
<td>Week 2/12/2016 T1-6</td>
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<td>T7-T8</td>
<td>Enrichment</td>
<td>Enrichment 2</td>
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<tr>
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<td>T6 - 7 x _ = 35</td>
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<td>L T6 - pictures</td>
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<tr>
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</table>

- reminder of rows vs. columns

4 boxes of markers
$12 for 3 bags of apples practice
1. Which of these is best represented by this number line?

![Number Line]

A. 24 + 4  
B. 24 - 4  
C. 6 + 4  
D. 4 × 6

2. Which expression means the same as 7 + 7 + 7 + 7?

F. 4 + 7  
G. 4 × 7  
H. 7 − 7  
J. 7 − 7

3. Which is another way to find the total number of insect legs?

![Insect Illustration]

A. 4 × 6  
B. 6 − 4  
C. 4 + 6  
D. 6 − 4
4. Ana saw the following ladybugs.

![Ladybugs]

How should she use skip-counting to count the spots on the ladybugs?

- F 4, 8, 12, 16
- G 5, 10, 15, 20
- H 3, 6, 9, 12
- J 2, 4, 6, 8

5. Each student has two feet. How many feet do nine students have?

- A 20 feet
- B 11 feet
- C 27 feet
- D 18 feet
## Students

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said he had trouble w/ #1
Appendix L: RTI Process within the CLT Flowchart

**RTI Process within the CLT Framework**

1. **All students receive universal screening.** Additional data can be included with the universal screening data (i.e., formative and summative assessments, teacher observation, attendance, office referrals).

2. **Collaborative Learning Team (CLT)** (grade-level/content teachers & relevant specialists) review data (academic, behavioral, and attendance). CLT determines students' needs and if students need an additional intervention. CLT can use the intervention protocol to help select appropriate interventions.

3. Teams determine who will deliver intervention(s) and monitor progress. **This needs to include frequency, duration and intensity and what tool will be used to monitor progress.** Designated person will enter data into RTI intervention system.

4. Implement Interventions (4-6 weeks)

5. CLT reconvenes to analyze the progress of intervention(s)

6. **Was the intervention successful?**

   - **Yes**
     - Continue with interventions
     - Implement, monitor and enter intervention progress into intervention data system and reconvene to discuss next steps.

   - **No**
     - Modify/Change Intervention
     - Implement, monitor and enter intervention progress into intervention data system and reconvene to discuss next steps.
     - CLT decides to make a referral to IAT. Complete IAT Referral